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DALLAS
JAMES BOND
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MACINTOSH

The first 30 games

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Which is right for you?

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FIRST STAR

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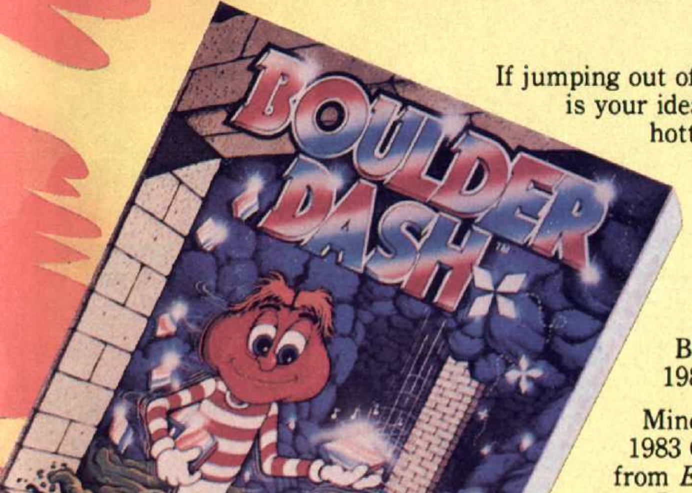
Explosive entertainment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COMPUTER GAMES™

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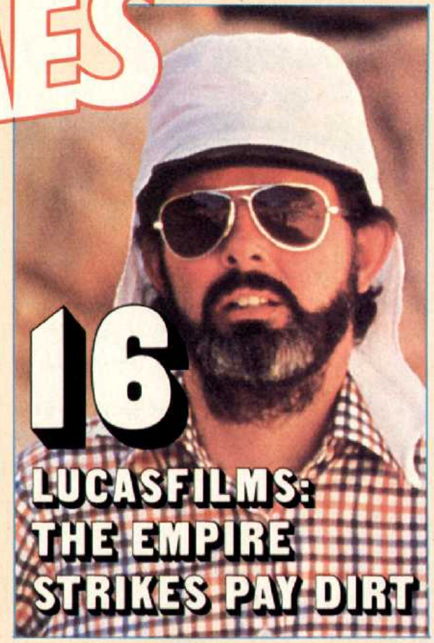

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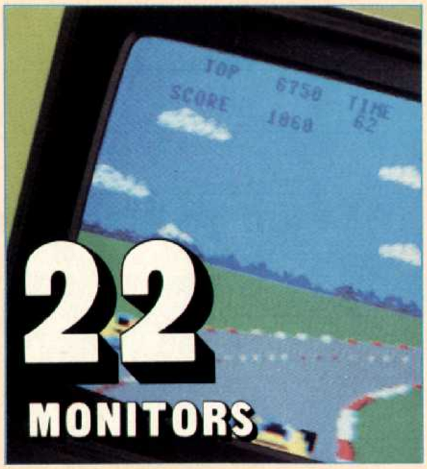

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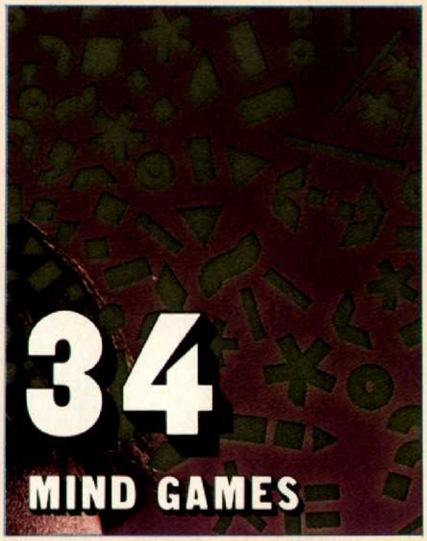

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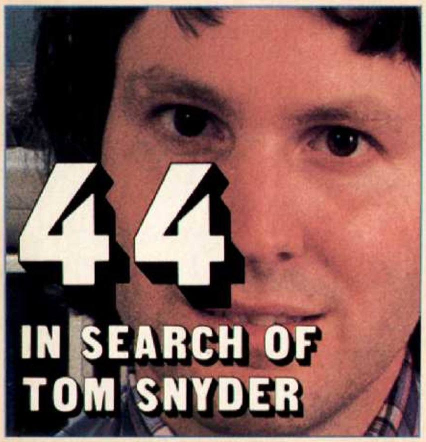

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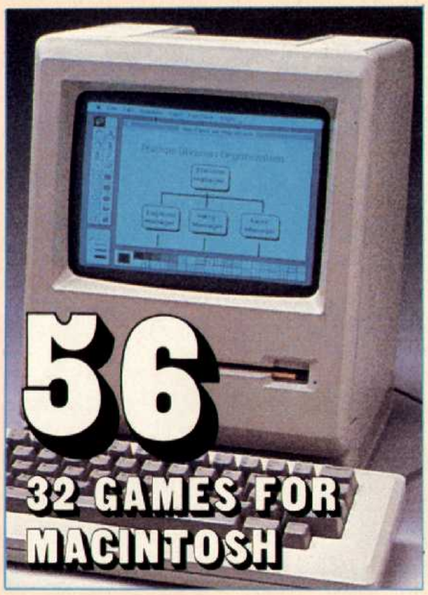

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SWAP SHOP

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LETTERS TO THE EDITOR

BLUE MAX HINT

Thanks for all the publicity you've given to *Blue Max* and to me in recent issues. I especially appreciate the accuracy of the article on beating *Blue Max* (June 1984). I've seen so many reviews of games in which I believe all the author did was play the game twice and paraphrase the instruction manual.

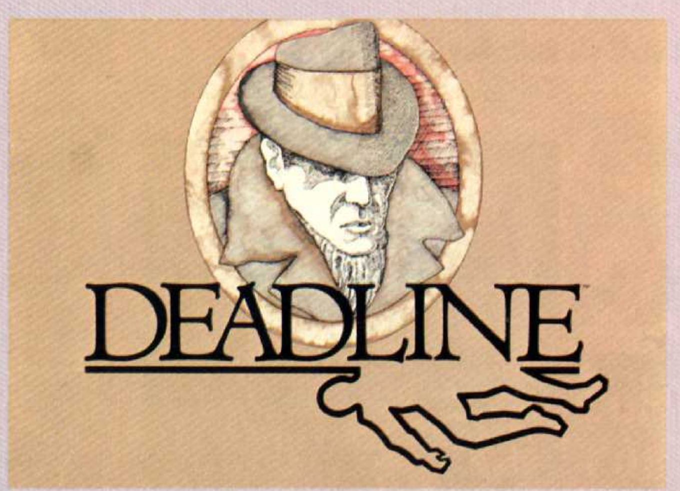
Another hint for the Atari version of *Blue Max:* When landing, move the plane to the bottom of the screen and touch down about one hangar's length before the hangar, so that the plane comes to a complete stop on the runway near the end of the hangar. Notice that the end of the runway will be on the screen, or almost on the screen. When this is the case, no enemy plane will appear to bomb you! Be sure not to touch down much later, or there will not be enough room left for takeoff.

Bob "Blue Max" Polin

THAT'S TELLIN' 'EM

I wish someone would encourage manufacturers not to release substandard cartridges. If they can't come up with a good version of a game for a given system, they shouldn't bother. Two examples where I felt I got burned—*Q*Bert* for the 5200 (though there were excellent versions for both ColecoVision and C-64) and *Centipede* for the C-64 (yet the 5200 version is very good). It would be nice if guys like you with the slick magazines would call it like it is and alert readers. The manufacturers actually get burned *more* when you guys don't call a bad game bad. I have since thought twice about buying other Parker Brothers and Atarisoft games—and didn't make purchases I might have otherwise made.

Joseph Fela



A disk drive detective's delight—and dilemma.

IN THE CLOSET

In Infocom's *Deadline*, I got to the upstairs closet and it seemed suspicious, so I knocked on the walls and the back wall had an unusual hollow sound to it. Is there anything important in there, and if so how do I get to it?

David Misner

Yes, there is something important in there. We won't give it all away, but there is a hidden room, and the entrance is not located in the closet. (Follow one of the suspects.)

NUMBER NINE...

I recently called your Hotline number and at the end I heard people talking, then I heard "15," then some sound effects and some guys saying something about "press the start button" and then "5" and then something about some contest. What's going on?

Chris Coleman

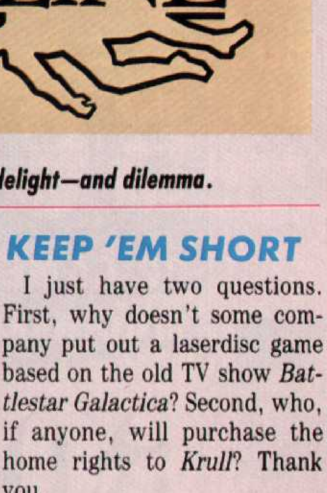
Here's another clue for you all. You'll have to play that backwards and steam the cover off the magazine to find out who buried Paul.

KEEP 'EM SHORT

I just have two questions. First, why doesn't some company put out a laserdisc game based on the old TV show *Battlestar Galactica*? Second, who, if anyone, will purchase the home rights to *Krull*? Thank you.

Mark Hensen

1. We don't know. 2. Atari.


COMMAND THE POWER OF COLECO'S
CABBAGE PATCH JR!
THE EXPLOSIVE NEW HOME COMPUTER SYSTEM THAT COMBINES 80K MEMORY AND DIGITAL "DA-DA" PACK WITH A DOUBLE-SIDED, DOUBLE-DENSITY DIAPER DRIVE
COMPUTER GAMES

CABBAGE PATCH FAN

I am a subscriber to *Computer Games* and I find your format of news, clues and reviews to be excellent and informative. All this put into consideration, I was angered at the terrible, misleading and offensive picture of the Adam computer in your June 1984 issue. I feel it's a terrible insult to a truly excellent machine.

Name withheld

BETTER LATE

You said the minimum score potential for *Dragon's Lair* was 300,000. Well in my opinion you couldn't score 100,000 with those tips. I have found many mistakes in your article. Here are the real solutions...

Falling Rocks—Push right twice.

Skulls & Skeletons—Push forward, hit sword, push forward, hit sword and push left out the door, then hit sword to kill the Crypt Creeps.

Lizard King—Push left, then a series of rights, then go forward and keep pushing sword.

Lava People—Push sword, when he puts it in the sheath push forward, forward, right, and all the rest of the moves are forward.

Giddy Goons—Sword, right, sword, forward.

Snakes—Sword, sword, forward.

Flying Horses—Right, left, right, left, right, left three times. The mirror image is the opposite.

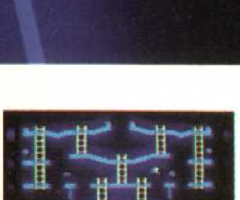
Bats on Steps—Sword, left, left, sword, left.

This should save a lot of folks a lot of quarters.

Scott King

Got a question? Got a gripe? Just want a half a million people to see your name in print? Punch your initials in here, partner, and write: Letters to the Editor, ***Computer Games,*** *888 7th Ave., New York, NY 10106.*

JUMPMAN'S A GREAT GAME.
BUT YOU'VE GOT TO WATCH YOUR STEP.



Meet the Alienators. A fiendish bunch who've planted bombs throughout your Jupiter Command Headquarters.

Your job? Use your lightning speed to scale ladders, scurry across girders, climb ropes and race through 30 levels to defuse the bombs before they go off.

That's the kind of hot, non-stop action we've packed into the award-winning,* best-selling Jumpman,™ and into Jumpman Jr.,™ our new cartridge version with 12 all-new, different and exciting screens.

Both games force you to make tough choices. Should you avoid that Alienator, climb to the top and try to work your way down, or try to hurdle him and defuse the bombs closest to you before they go off?

If you move fast you'll earn extra lives. But if you're not careful, it's a long way down.

So jump to it. And find out why Jumpman and Jumpman Jr. are on a level all their own.

One to four players; 8 speeds; joystick control. Jumpman has 30 screens. Jumpman Jr. has 12 screens.

EPYX COMPUTER SOFTWARE

STRATEGY GAMES FOR THE ACTION-GAME PLAYER.

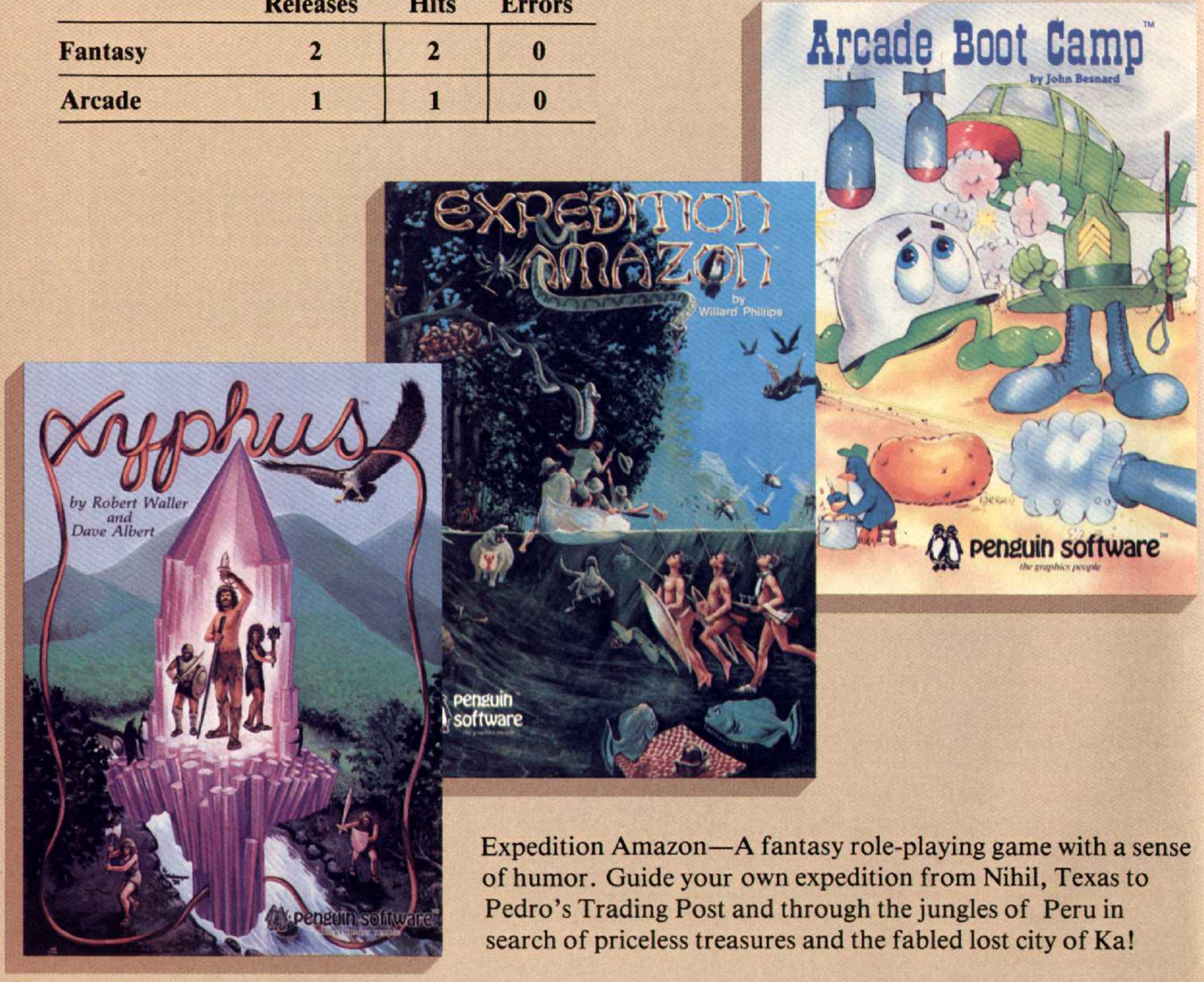
EPYX
JUMPMAN
EPYX
Jumpman Junior

---

*1983 C.E.S. award winner.

Penguin Scores Again!

	Releases	Hits	Errors
Fantasy	2	2	0
Arcade	1	1	0


Arcade Boot Camp™
by John Besnard
penguin software™
the graphics people
Expedition Amazon
by Willard Phillips
penguin software
Xyphus™
by Robert Waller and Dave Albert
penguin software

Expedition Amazon—A fantasy role-playing game with a sense of humor. Guide your own expedition from Nihil, Texas to Pedro's Trading Post and through the jungles of Peru in search of priceless treasures and the fabled lost city of Ka!

Arcade Boot Camp—Tired of getting 30 seconds of arcade play for your quarter? Face forward, Civilian, and march over to your dealer for this one. Train in five areas vital to arcade skills: Driving, Chopper Flying, Shooting, Jumping & Ducking, and Obstacle Course.

Xyphus—Explore the Lost Continent of Arroya as you develop a band of warriors and spellcasters in preparation for the final confrontation with Xyphus, Lord of Demons! This fantasy role-playing game features four-player independent movement and six separate scenarios, each set in a different region with different types of creatures, weapons, and spells. A true breakthrough in its genre, **Xyphus** is destined to become a classic.

penguin software™
the graphics people

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(312) 232-1984

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FIRST NEWS WAVE

HOT GOSSIP

You asked for it—**Pac-Man Pasta,** coming soon to your grocer's freezer from **Chef Boyardee**... It looks like **The Sente Solution** was to start a company and sell it to **Bally Midway** before any games hit the street. Actually, Sente's second game, **Snack Attack,** was spotted before the company was sold. Incidentally, there is no truth to the rumor that **Pizza Time Theater** was planning to go into **electronic delivery** of pizzas before they went **bankrupt**... You know the **curvaceous** legs on the packaging of **Spinnaker's Aerobics** program? They belong to **Sue Currier,** president of **Softsync**! Sue used to be a fashion model... **Micro Lab** has paid a whopping **$1.3 million** for the rights to make **First Star's** hit **Boulder Dash** for the Commodore 64, Adam/ColecoVision, Apple and PCjr. Micro Lab is also starting a new **hardware** line, but they're not saying what they're working on... **Wizardry** has been translated into **French** and is topping the charts in Frogland. Designer **Robert Woodhead** has been in Europe, helping with the **German** translation... A joke from **Apple** founder **Steve Wozniak**—"I asked **President Reagan** what he thought of the PCjr and he said he was against **abortions**"... **Commodore** has inked a deal with **Marvel** comics to develop a series of games based on Marvel characters like **The Hulk** and **The Human Torch**... **Entech** will award **$1,000** to the person who writes the best original song with their **Studio 64** music program. To get an entry blank, write Computer Song Writing Contest, P.O. Box 881, Sun Valley, CA 91353. You might also ask them about their **Game Designer 64,** which lets you create your own games...

Spectravideo is one of the first casualties of the wild and crazy home computer business. Clint Eastwood contributed the voice synthesis for Atari's first laser game, Firefox. Ocean Quest (left) is one of the colorful new science programs developed by HES.

Atari recently laid off **Eastern Front** designer **Chris Crawford,** and their chief scientist **Alan Kay** quit, telling *The New York Times,* "Last year was like a war." But **Mike Hally** is still there. He created the smash hits **Star Wars** and **Firefox** and the bomb **Gravitar**. Meanwhile, Atari has picked up the licenses for the arcade game **Zookeeper** and **Steven Spielberg's Gremlins**... Did you know that **Crystal Castles** was supposed to be a variation on **Asteroids,** and the original title was **Toporoids**? Did you know that **Infocom's Starcross** was originally titled **A Gift From Space**? Here are a few other Infocom games and their original names: **Deadline**—Was It Murder? **Planetfall**—Sole Survivor. **Infidel**—Pyramid... **Epyx** president **Michael Katz** has opened up a store in San Francisco that sells **Cabbage Patch** dolls! Mike probably gets a good deal on them—he used to work for **Coleco**... Speaking of which, we understand Coleco prez **Arnold Greenburg** has our Cabbage Patchjr poster on the wall in his office... **Williams Electronics** was **not** purchased by **Bally Midway,** as was reported in these pages. We jumped the gun on that one... Guess who's getting into software? Ex-acid-head **Tim Leary**! Leary promises programs that will "revolutionize the way people think." Far out! Turn on, tune in, boot up!... The **Gillette** Company recently acquired 40% of **Datasoft**. No word on when they'll be packing a free **Good News** razor in with their games... **Will Harvey,** who designed **Music Construction Set** for **Electronic Arts,** graduated from Uplands Senior High in Foster City, CA, in June. He was president of the student body... Will **AtariLab** still be called AtariLab once they release it for Apple and Commodore 64? Could be confusing. Atari plans 20 applications for the science module, including the measurement of **nuclear radiation**. Keep an eye out for a complete line of **science software** from **HES**... **Spectravideo** has pulled out of the computer business, as if anybody cares... **Mattel** is back in the computer business! They've licensed **Barbie, Hot Wheels** and **G.I. Joe** for computer programs to **Epyx**... **Parker Brothers** is starting to release their disks with Apple II games on one side and the IBM PCjr version on the other... Our contact at **Access** ("Beach-Head") Software is named Margery **Nerdin.** We kid you not... There's a new game out for executives who want to sneak one in while they're at work. It's called **Forbidden Quest,** and when you hit one key, a financial **spreadsheet** appears on the screen. It doesn't do anything, but it comes in handy if the **boss** walks in... Personally, we're still waiting for the **Hewlett-Packard Lickscreen**... That's all, folks!

NEW PRODUCTS

APE · FACE™
A Product of DIGITAL DEVICES Corporation
Atlanta, Georgia U.S.A.
Model XLP

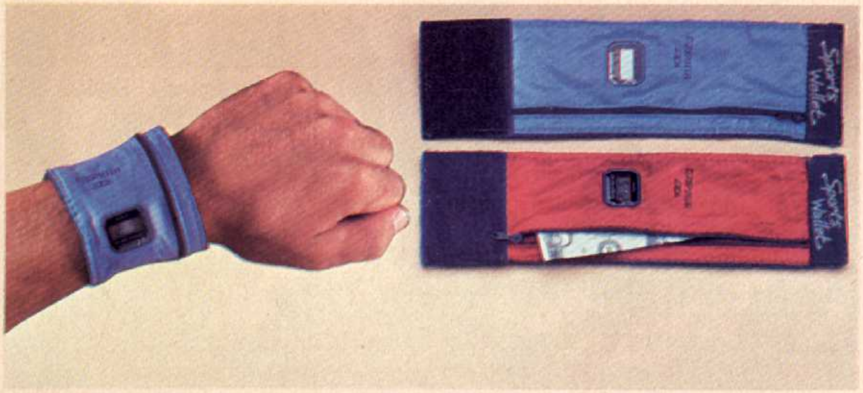
PRINT TIME FOR BONZO

Atari's 1027 letter-quality printer is fine for many purposes, but a more rugged machine's necessary if you've got a lot of work in mind. Unfortunately, you can't just plug in a third-party printer and press a button—as with everything else in the world of computers, the proper interface is required. That's why you might consider the *Ape-Face*, which permits the use of Epson, Okidata, Centronics and other parallel printers. The 48P model works with 400 and 800 Ataris, and the XLP is for the new XL line. Available for $89.95 from Digital Devices (404-872-4430), both interfaces are guaranteed with the "Ape's *Stomp* of Approval" and are compatible with all Atari hardware and software.

SMITH-CORONA
L-1000
POWER
10 12 15
TOP OF FORM
FORM FEED/SELF TEST
CLEAR
SET

IS THIS LETTER–QUALITY OR WHAT?

Smith Corona's TP-I opened the gates for the now nose-high flood of under-$1,000 letter-quality printers, but their TP-II and TP-II+ vanished from sight nearly overnight. Finally, the definitive version has been released, an enhanced version of the TP-II+—now known as the L-1000. It boasts bidirectional printing, dual ports (RS232 and parallel), a self-test option, automatic underlining and carriage return, adjustable baud, parity and character length settings, and programmable margins. The 570-character buffer comes in handy, and it's easy to change the printwheels and ribbon cassettes. The L-1000 is much quieter than your average electric typewriter, a significant improvement over its ancestor, the machine-gunning TP-I. But it does take its time, with a top print speed of 12 characters per second. The $545 L-1000 can be outfitted with an optional tractor feed attachment that goes for $149.



NO SWEAT!

How many times has this happened to you? In the middle of a furious game of *Defender*, you get so worked up that a wave of sweat rolls down your arms and short-circuits the joystick. (That's how we lost our founding editor, Nolan Shrubnell, who was electrocuted while playing *Zork II* on an ungrounded computer.) Unless you want to get french-fried, or have your joystick go dead just as an alien saucer's bearing down on your ship, you'd better strap a "Computer Jock" sweatband around each wrist. This must-have safety device doubles as a watch and triples as a wallet (for any money you have left over from your last trip to Software City). Hey, it's only $12.95 (plus $2.00 shipping and handling) from Sweet Gum, Inc., 15490, N.W. 7th Ave., Miami, FL 33169. Or call 1-800-237-9338.

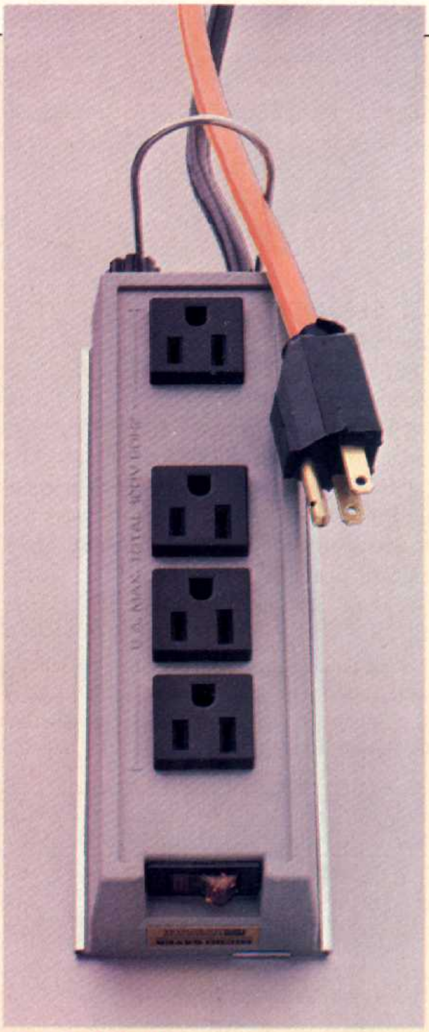
I'm
Chip
Wrecked

READ MY LIPS

How you can get a t-shirt that only your computer—and a few machine language programmers—can understand. And if you're not computer literate enough to comprehend its message, you can always opt for the one that sums up exactly how the *Computer Games* staff feels most of the time. Both are available in red, blue, yellow, pink, white and beige, and in sizes small through extra-large. They're $10.95 each or $20.95 for two, and $2.25 shipping and handling per shirt. Micro Goodies, 609-874-4328

BUY IT OR DIE!

For shoot-'em-ups that require jetting from one side of the screen to the other as quickly as possible, you can't beat the Competition Pro. The pair of huge, hard-to-miss fire buttons are handy for lefties as well as right-handed alien killers, and even Mr. T would have trouble breaking the stick's solid steel shaft. Shown here, the new Pro 5000 model interfaces between the Atari 5200 console and the original joystick, allowing full use of the keypad for game selection, pause and reset features. Coin Controls sells it for $24.95.



TO SURGE WITH LOVE

As your system expands, the number of power cords multiplies faster than you can say IBM-compatible—till some dark night when they snake out and wrap around your throat like a gang of slimey tentacles. Unless you plug them into a four-outlet power strip like the Micro Saver, whose special cable support guide keeps them all neatly in place.

And with built-in line noise filtering and surge suppression, this unit also protects your system from sudden shifts in electrical current—which could crash your program or even damage chips inside the computer. The nine-foot cord and one-year warranty make Kensington's Micro Saver an attractive value at $69.95.

WHAT'S IN STORE FOR YOU?

FUTURE RELEASES FROM THE TOP GAME COMPANIES

ACTIVISION

Beamrider, H.E.R.O., Pitfall, Zenji, Toy Bizzare (C-64). Decathlon (AT, C-64). On Court Tennis, On Field Football (AT, C-64) Explorer, Wonderbolt, Camp Clean-up (C-64, COL, AT). The Activision Pencil (C-64).

ATARI

Final Legacy (AT, 5200). Zookeeper (2600). This is Ground Control, Through the Starbridge, Peek-A-Boo, Letter Tutor, Word Tutor (AT). Yaacov Agam's Interactive Painting, Find It, The ABC of CPR, Wheeler-Dealer, Simulated Computer, Telly Turtle, (AP, AT, PC, C-64). Gremlins, Track and Field, Mario Brothers, Donkey Kong, JR. (AP, C-64, PC). Typo Attack (AP, C-64, PC, jr, VIC). Crystal Castles (AP, C-64, PC, VIC). Centipede, Donky Kong, Moon Patrol, Pac-Man (jr).

BAEN

Wings out of Shadow (AT, AP, PC). Berserker Raids (AP, AT, C-64, PC). The Electric Dragon, Snake, Starclash II.

BRODERBUND

Championship Lode Runner (AP, C-64). Raid on Bungeling Bay, Castles of Dr. Creep (C-64). Stealth, Spelunker, Whistler's Brother (AT, C-64). Captain Goodnight and the Islands of Fear, Mercy Birds, Bank St. Filer, Bank St. Mailer, Dazzle Draw, Where in the World is Carmen SanDiego? (AP).

CBS

Math Mileage, Astro-Grover, Big Bird's Funhouse, Sesame Street Letter-Go-Round, The House that Jill Built, Key to Responsible Driving, Adventure Master, Pathwords, Forecast, T-Rex, The Honey Factory

COLECO

Tarzan, War Games, Cabbage Patch Adventures in the Park, Fortune Builder, Dr. Seuss Fix-up the Mix-up Builder (Adam, AP, AT, C-64).

DATAMOST

Ankh, Mychess II (AP, AT, C-64). Earthly Delights (AP, PC, jr). Jet Boot Jack, Mabel's Mansion, Polar Pierre (AT, C-64).

DATASOFT

Juno First, Mancopter, Meridian III (AT, AP, C-64, PC, jr). Bruce Lee (AP, C-64, PC, jr). Dallas (AT, AP, PC, jr). Zaxxon (AP IIc). Lost Tomb (AP, PC, jr).

EPYX

Hot Wheels, G.I. Joe, Barbie, Breakdance, Robots of Dawn.

FIRST STAR

Romper Room's I Love My Alphabet (AT, AP, C-64). Spy vs. Spy (AP. C-64). U.S. Adventure (AT, AP, C-64, PC).

INFOCOM

Cutthroat (most computers)

KONAMI

Track & Field 1, Track & Field 2.

PARKER

Frogger II: Threedeep!, Mr. Do's Castle, Montezuma's Revenge, (AT, 2600, 5200, C-64, COL).

PENGUIN

Xyphus (AP, C-64, PC, MAC). Pensate, Coveted Mirror, The Quest (MAC).

ORIGIN

Car Wars, Ogre

QUICKSILVA

Hideous Bill and the Go-Giants, Space Ambush, Falcon Patrol, Escape, Timegate, Garbage Gobbler, Fred.

SCHOLASTIC

Operation: Frog, Microzine #4, 5 and 6, Math Man, Quations.

SSI

Cosmic Balance (C-64). Objective Kursk (AP, AT). 50 Mission Crush (AP, AT, C-64).

TRAPEZE

Lifespan, SETI (AP, AT, C-64, PC).

SYNAPSE

Enigma, Mindwheels

VCS=Atari VCS, IN=Intellivision, 5200=Atari 5200, AT=Atari Home computers, COL=ColecoVision, VIC=Commodore VIC-20, 64=Commodore 64, AP=Apple II, TRS=Radio Shack TRS-80, TI=Texas Instruments TI 99/4A, VEC=Vectrex, PC=IBM PC, MAC=Macintosh.

HIT GAMES & HIGH SCORES

COMPUTER GAMES

1. *FLIGHT SIMULATOR II (Sublogic)*
2. *LODE RUNNER (Broderbund)*
3. *SARGON III (Hayden)*
4. *ULTIMA III (Origin)*
5. *ZAXXON (Datasoft)*
6. *SUMMER GAMES (Epyx)*
7. *WIZARDRY (Sir-Tech)*
8. *ZORK I (Infocom)*
9. *TRANSYLVANIA (Penguin)*
10. *STAR LEAGUE BASEBALL (Gamestar)*

VIDEO GAMES

1. *PITFALL II (Activision)*
2. *CENTIPEDE (Atari)*
3. *WARGAMES (Coleco)*
4. *Q*BERT (Parker)*
5. *BURGER TIME (Intellivision)*
6. *POLE POSITION (Atari)*
7. *POPEYE (Parker)*
8. *KANGAROO (Atari)*
9. *DEFENDER (Atari)*
10. *DECATHLON (Activision)*

ARCADE GAMES

1. *PUNCH OUT (Nintendo)*
2. *SPY HUNTER (Bally)*
3. *VS. TENNIS (Nintendo)*
4. *TRACK & FIELD (Konami/Centuri)*
5. *POLE POSITION (Atari)*
6. *M.A.C.H. 3 (Mylstar)*
7. *SPACE ACE (Cinematronics)*
8. *STAR WARS (Atari)*
9. *FIREFOX (Atari)*
10. *TIME PILOT '84 (Konami/Centuri)*

HIGH SCORES

FIREFOX: 376,052
by Steve Harris
SPY HUNTER: 346,890
by Phil Britt
TRACK & FIELD: 96,850
by Chris Holder
PUNCH OUT: 1,453,630
by Yasuhiro Oda
SPACE ACE: 770,866
by Yasuhiro Oda
STAR WARS: 300,007,866
by Robert Mruczek
DISCS OF TRON: 370,900
by Scott Starchfield

Our thanks to Walter Day and the Twin Galaxies International Scoreboard for the high scores, to *Billboard* magazine for the video games list, which is © 1984 by Billboard Publications, Inc., compiled by the Billboard Research Department and reprinted with permission.

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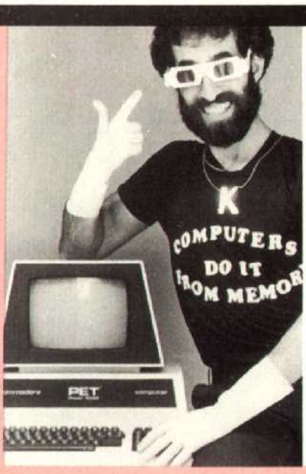
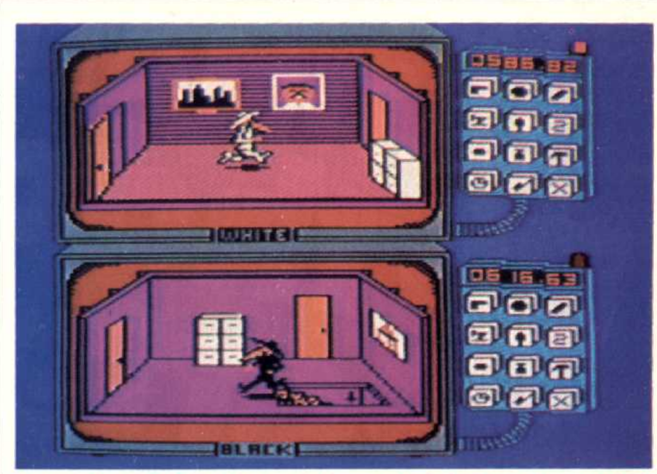
HOW TO MAKE LOVE TO A COMPUTER

This is Dr. Maurice K. Byte (alias "Maury The K"), author of that hot new book —*How To Make Love To Your Computer (Pocket Books).* Dr. Byte, in addition to writing his other well known self-help books (*The Byte Report* and *I'm OK, You're 8K*) is a purveyor of hardcore software and adult programming aids. The new book, he claims, was based on countless minutes of laboratory research and "contains more chapters than *The Joy of Sex*."

Byte's work centers on the forbidden attraction between man and machine.



Topics covered—Wanda Whips Wordstar, Premature Programming, inflatable love computers, genuine imitation sheepskin anti-static mats, computererotica, ribbed diskettes and erotic babydoll dustcovers for your computer. The book is a riot, even if you don't know your Apple from your Wang.



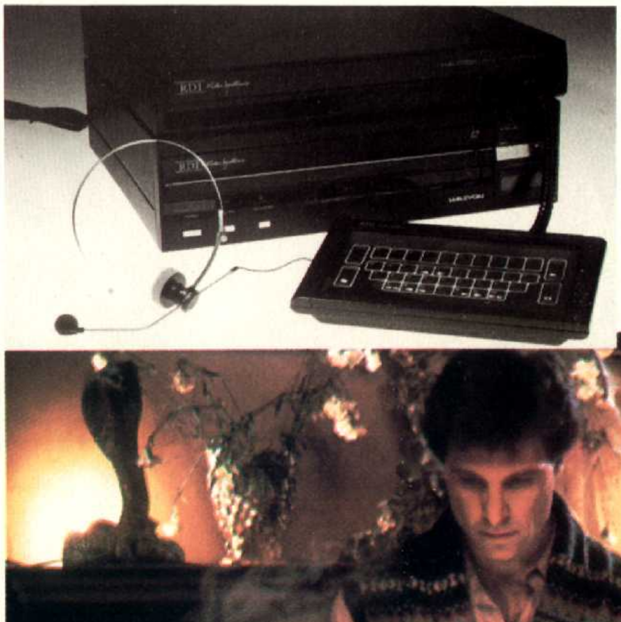
NEW SPY VS. SPY GAME

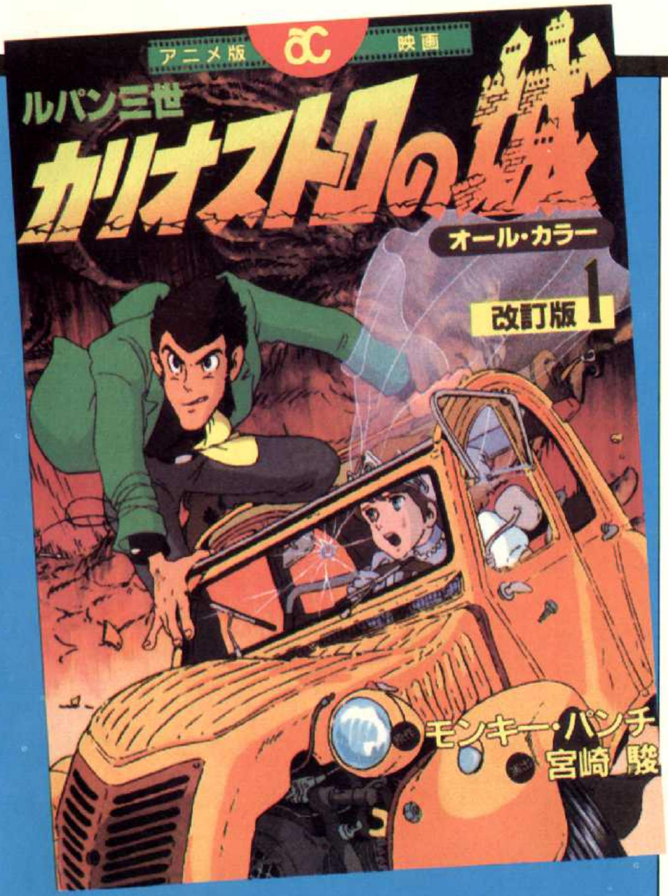
First Star Software has acquired the license to create computer games based on the popular *Mad Magazine* cartoon strip "Spy Vs. Spy." The strip was created 20 years ago by Antonio Prohias, who was a political cartoonist in Cuba until Castro seized power. Mad's "Spy Vs. Spy" books have sold more than two million copies over the years. In the cartoon strip and in the game, The White Spy and The Black Spy spend a lot of time blowing each other up and playing similar amusing tricks on each other. Designer Mike Riedel is programming the one- or two-player game for First Star, and it will be available this month for Apple, Commodore 64, IBM and Atari computers.

First Star will also be making games out of the children's TV show, Romper Room.

LASER ADVENTURES FOR THE HOME

***Dragon's Lair*-style games have finally made it into the home, with the first and only interactive videodisc gaming system. Halcyon is made by Rick Dyer's RDI Video Systems, which developed the technology that made Don Bluth's smash arcade game possible. It features voice synthesis and recognition, so you can speak your commands as you play out one of the five adventures that can be played only on the Halcyon. Four of the games are animated, while *The Spirit of Whittier Mansion*, shown here, was shot on film and makes you feel like you're inside a real horror movie.**

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ルパン三世
カリオストロの城
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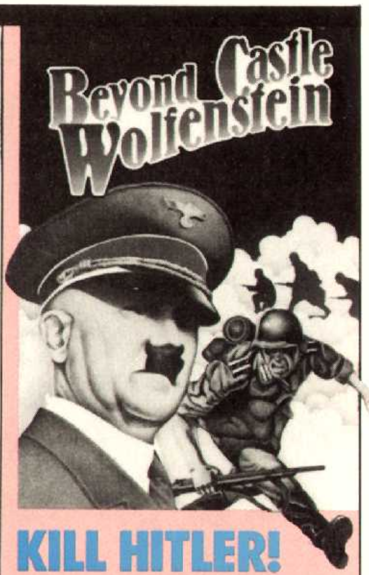
宮崎 駿

LUPIN HANGER?

Several readers have informed us that the laser game *Cliff Hanger* uses footage from a popular Japanese cartoon called "Lupin." The character of Arsene Lupin was created by French novelist Maurice LeBlanc at the beginning of this century. Japanese writer/artist Monkey Punch (Kazuhiko Kato) resurrected Lupin's grandson, Lupin the 3rd, in the early 1960s. The character was then spun off into two movies, a television show that ran 155 episodes and a cartoon. The laser game was pieced together from the two movies, *Mystery of Mamo* and *The Castle of Cagliostro*. Lupin isn't much of a hero at all—he's a master thief. ***(Thanks to Max Gore and Douglas Orlowski)***

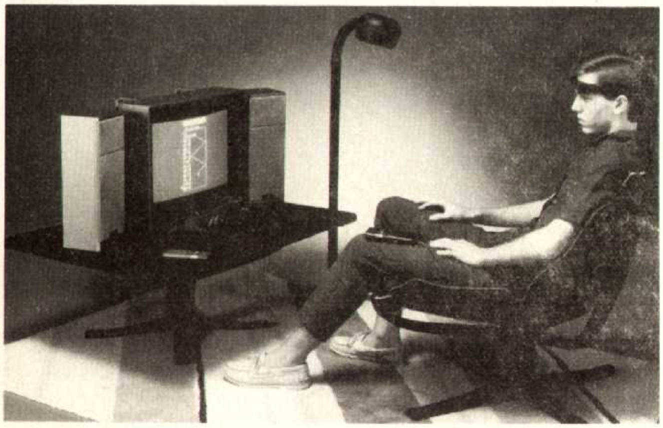
SHOCKING STORY

A man named Lang Allen from Georgia has invented a device that attaches to the joystick of an arcade game and delivers jolts of static electricity to the player's hand. The effect of Ultra Shock, as Allen calls it, can be seen in the photo—every hair on your body stands on end. Allen claims that Ultra Shock is completely safe and is not used as punishment for making mistakes. Instead, it's used as a reward for reaching new boards and high scores. The device can be hooked up to just about any arcade game. Is Ultra Shock the next big arcade sensation? Allen says he's already deluged with orders.



KILL HITLER!

If you liked *Castle Wolfenstein*, you'll love *Beyond Castle Wolfenstein*. This time you try to find a briefcase with a bomb, kill Nazi guards and sneak into Hitler's bunker.



EYEBROW CONTROL

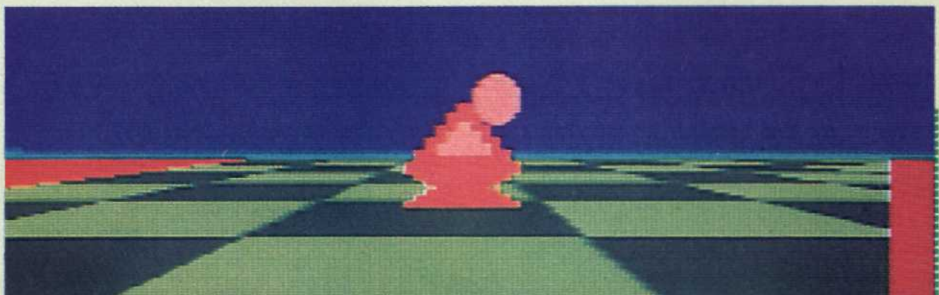
Look ma, no hands! With Atari's new MindLink controller, your hands are free to eat, knit, file your nails or whatever, while you play computer games. The infrared sensors wrap around your forehead with Velcro straps and plug into the MindLink transmitter, which plugs into the Atari computer, VCS, or 7800 game system. It doesn't really read your mind, but it does detect muscle impulses when you move your eyebrows. Right now the $100 device plays games like *Breakout*, and Atari says that software will be available on ESP, thought games, memory and biofeedback. Groucho Marx would have been great at this.

The Empire Strikes Pay Dirt

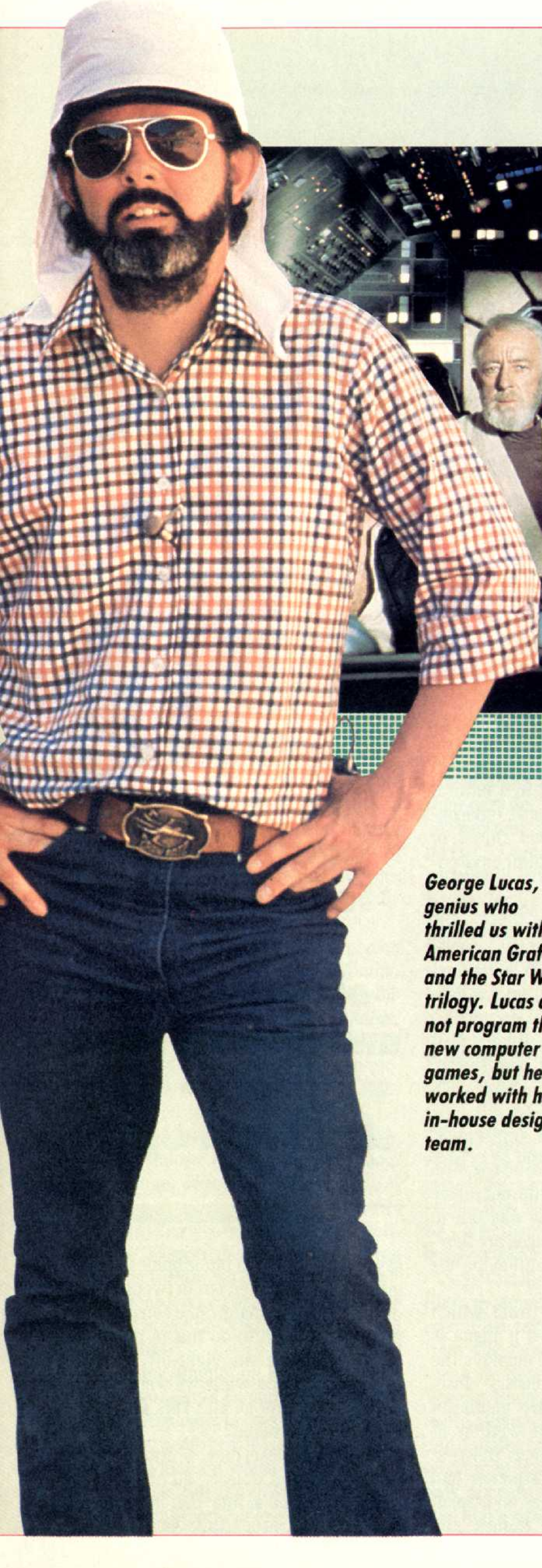
LUCASFILMS

How they created the incredible Ballblazer and Rescue On Fractalus

By Steve Bloom



Ballblazer is a futuristic first-person soccer-like game that takes place on a checkerboard grid. Each player controls a "rotofoil" and attempts to blow a floating ball past his opponent, through the goalposts. These goalposts move back and forth and also closer together as the game progresses. The graphics of Ballblazer are awe-inspiring.

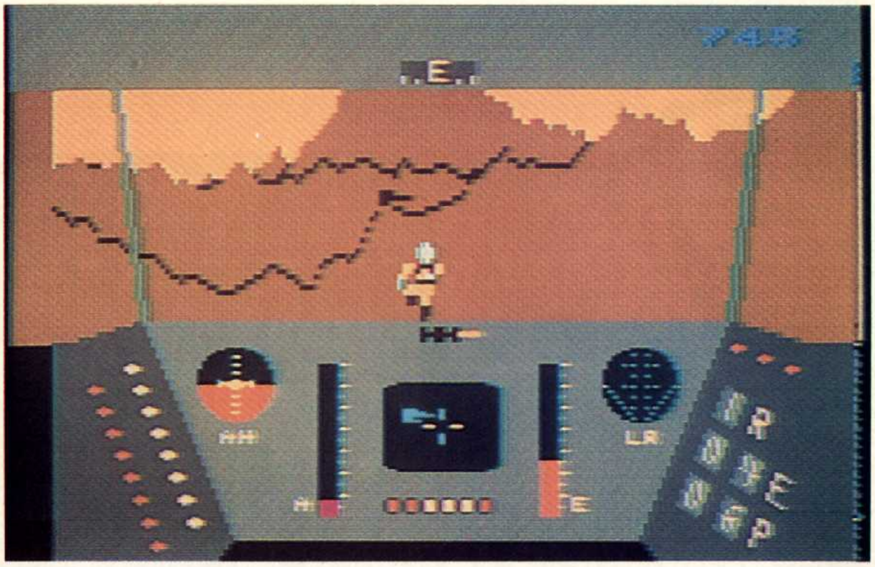


George Lucas, the genius who thrilled us with American Grafitti and the Star Wars trilogy. Lucas did not program the new computer games, but he worked with his in-house design team.

George Lucas' empire strikes me as rather bland as I slide into a parking spot across from the Lucasfilm headquarters—a decidedly low-tech complex tucked away in the sleepy Northern California village of San Rafael. No holographic light shows on the lawn here; Lucas likes his privacy and wants to keep it that way, which explains why I have been sworn not to reveal the company's address. I promise not to tell as long as I can meet with George. The publicist turns her head in disgust.

Apparently, *Star Wars* guru and director of one of my favorite films, *American Graffiti*,

PHOTO BY SYGMA



Rescue on Fractalus—Lucas had the design team make it more of a shoot-'em-up.

Lucas has skipped town for the day or week, so I'll have to be content to talk with eight game designers about the two games Lucasfilm's computer division has been working on for the past year.

As it turns out, Lucas probably wouldn't have had much to say about *Ballblazer* and *Rescue from Fractalus* anyway. According to David Levine, who designed and programmed *Ballblazer*, "He'd sit down and play and stare and not say a whole lot, which was real disconcerting to me. Then he'd say, 'Hey, it's great.' "

"I remember the discussion about the fire button when he was looking at *Rescue*," says games group leader Peter Langston. "We told him what we had in mind and he said, 'Is that a matter of principle or gameplay?' We said, 'Well. . .' And he responded, 'Principle, uh-huh. It's not going to work.' "

"It's a very open charter," Langston explains. "Basically, his approach from the beginning was: 'This is an interesting area of entertainment, there's got to be a lot of interesting things to do out there, go do something.' That's essentially as defined as he wanted to make it. In other words, we didn't have a nice little script to follow."

If there ever was a script, it was read to the press at an Atari reception in June 1982, when Atari chairman Ray Kassar announced a "joint venture" between Atari and Lucasfilm. It's now clear what that agreement was all about: Lucasfilm will design games that Atari will market under the name Atari-Lucasfilm. *Ballblazer* and *Rescue from Fractalus*, for Atari computers and the 5200, are the first products of that agreement. Most likely the games will be available for other computers in the near future.

Both games are remarkable achievements. An intergalactic soccer match, *Ballblazer* takes place on a dazzling, scrolling grid. Both players view the action from inside triangular vehicles that are controlled with joysticks. There are two 3-D perspectives on the screen, one stacked on top of the other. The object is to capture the ball and fire it into the moving goals at the opposite ends of the grid. At first glance, *Ballblazer* makes little sense, but after awhile you can't help but catch on.

David Levine had never designed a game before he joined Lucasfilm. Previously he worked for a software development firm in Chicago and attended the University of Illinois, where he discovered that "a good game involves 30 other people playing on four teams." Levine says he looks to the "older, original computer games, like *Space War* and *Lunar Lander*," for inspiration.

"In those games," he explains, "you saw a little simulation of reality happening—for instance, you had suns with gravity in *Space War*—which you could control via your own natural control mechanisms—your brain, reflexes, responses. You controlled it in a natural way because it was a natural environment, and that is the main thrust of *Ballblazer*—to provide a natural environment.

"It's the world of simulation," Levine adds. "Both these games are simulations, first and foremost. The gameplay is added."

Levine took three months just to "work up" the grid. Unlike most computer games, Levine's grid is smooth; in fact, I originally mistook it for a laserdisc backdrop. What's the trick? "Anti-aliasing," Levine replies. "It's a technique used religiously by our graphics group. It's a method of eliminating staircased edges on the screen." By using five different colors at certain grid points, Levine was able to "make it appear as if the edges are moving smoothly from one scanline to the next—as opposed to jumping."

The graphical technique from which *Rescue from Fractalus* owes it name is even more unusual. *Rescue* employs the relatively new school of geometry—fractals—to create an impressive mountain landscape (seen through the window of the player's spaceship). It was the first time staff scientist Loren Carpenter had ever generated fractal images on a small computer. "We have some frames," he says, "that we do in our graphics department that have taken ten to twenty hours on a VAX 11780 (mainframe computer) to produce. We had to do this in dozens of milliseconds on an eight-bit machine (Atari 800). For a while we weren't sure it could be done at all. This game was really an experiment."

"Lucas noticed that *Rescue* was too pacifistic, and told us to put in gun emplacements and make it more of a shoot-'em-up."

Carpenter describes a fractal as a "mathematical object, an abstraction like a circle or a line that has certain mathematical properties. One of these

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The design team that created Ballblazer _and_ Rescue on Fractalus_—Charlie Kellner, David Levine, Peter Langston, David Fox, Loren Carpenter and Gary Winnick._

properties is that it is in some sense infinitely rough, crinkled or spongy. The stars in the sky, for instance, satisfy that property. If you take a small patch of the sky and magnify it, it looks like a large patch of the sky—you can't tell one from the other. That's one of the ways you can tell you've got a fractal."

(In a recent article about fractals, *Smithsonians* wrote: "Euclid's lines, planes and spheres describe the world of built things. Fractals tackle the chancy intricacies of nature. They are a family of irregular shapes with just enough regularity so that they can be mathematically described.")

Rescue from Fractalus is a first-person cross between *Star Raiders* and *Defender*. The object is to save numerous pilots who were shot down on the planet Fractalus. Enemy Jaggis are manning gunposts in the hills, and saucers zoom into the picture every now and then. As you fight them off, you are always searching for pilots, who appear as green crosses from out the window or blips on your long-range scanner. If you land within range of a pilot, he runs towards your ship, growing larger in size with each footstep. Suddenly he disappears and you hear three knocks on the airlock door. Press the "3" key on your keypad or keyboard and the pilot is sucked (that's what it sounds like) into the ship.

The flying simulation in *Rescue* is as good as I've seen in a computer game, and the Lucasfilm gang knows it. David Fox, whose only game credit is *Mix 'n 'Match Muppets,* which he wrote five years ago for Children's Television Workshop, led a group of four programmers and animators in the design and development of *Rescue*. "I had never seen a point-of-view flight game over a terrain where the terrain looked real like this one does—where you can see mountains and you can't see *behind* the mountains," Fox maintains. "I've seen some flight simulation games that attempt to simulate the flight of an airplane, but they're not action games. The graphics also tend to run a lot slower than ours do."

"We spent a lot of time making things go fast," Carpenter says. "Every frame is completely different; they're all unique. Except for the towers [gunposts] and the ships [saucers], there are no stored images. The landscape is completely constructed on the fly every frame. That's a lot of computing going on."

Attention to detail already seems to be the hallmark of Atari-Lucasfilm games. For instance, the farther you land from a pilot, the longer it will take for him to reach the ship. Or as Carpenter contends: "Everything is defined in three dimensions in an infinite world. If you fly past a pilot, you can make a U-turn and pick him up; he'll be there *when* you expect him to be there. Our model of the environment behaves like a real world should behave."

Says Charlie Kellner, who contributed flight dynamics and special effects to *Rescue*: "We take a lot of our inspiration from the movies. For example, in the scene in *Return of the Jedi* in Jabba's Throne Room, every one of those bad, nasty aliens standing around has a name and a mother and father; they even know what they had for breakfast. Even if he only appears for two seconds, they still give him a three-dimensional background to make him real. The fantasy is always described much farther out than the piece that you see in the movie. And that's what we try to do with the games too."

Indeed, the ship you fly in *Rescue* (a "modified" Valkyrie class fighter) weighs 30,315 kg at 1.0 g and has a maximum cruising speed of 8,640 km/h (Mach 7.2). Its first flight was on January 17, 2184, and the fighter was modified for behind-the-lines combat in the "Blue Harvest" War of '84. Similarly, *Ballblazer* is set in the future (3077) and has its own bizarre storyline. But what's even more interesting about *Ballblazer* is its soundtrack. It's a fluid piece of computer music that stands on its own—whether the game is in progress or not.

Peter Langston, a self-described "pinball refugee," composed the score "as an audio analog to what David [Levine] was doing with the graphics." First he wrote a bass line and chord structure that had people dancing to it in his office, but it tended to get boring after 15 minutes. "So it was at that point," Langston recalls, "that I came up with the idea of doing improvisational lead lines over it that would fade in, play for awhile and then fade back out." The result was an infectious, new wave-style, tightly constructed composition that would make Thomas Dolby stop in his tracks.

"One of the things we learn just by looking around us is that George doesn't miss a trick," Langston says. "Ben Burt, who did the sound on the *Star Wars* movies, has more Oscars than anyone else around here. Both of these games have sounds that really tie into the reality we're trying to create."

"The sound in *Rescue* is quite complex," Kellner comments. "Turn off the picture and sit back and listen; at any one time you'll hear ten to thirty sounds. It's a very rich texture. Every action and every response has a sound. It's one of those things that if it wasn't right you'd know it."

"That's the whole illusion business in general," Levine joins in. "You don't notice it when it's right."

George Lucas, however, did notice that *Rescue*, in its embryonic stage, was too pacifistic for his taste. In the original storyboards, the Valkyrie fighter was chased by an enemy craft; the only way to destroy it was to trick it into crashing. "He told us to put in the gun placements and make the game more of a shoot-'em-up," Fox says.

"Some suggestions he made were considered," Levine offers wryly. "One of the

CONTINUED ON PAGE 58

THE HOTLINE

...NEW YORK...LONDON...PARIS...PALO ALTO...

This is the story of the year. ATARI has been SOLD. JACK TRAMIEL, the guy who founded COMMODORE 25 years ago as a little typewriter repair shop, left Commodore six months ago. He had built that company up to the BILLION dollar organization it is today. The Commodore VIC-20 and the Commodore 64 computers have sold at least FIVE MILLION UNITS in the last three years. Partially because of Tramiel's success at Commodore, TEXAS INSTRUMENTS, MATTEL and TIMEX/SINCLAIR dropped out of the computer market, and Atari lost over $500 MILLION last year. Now Tramiel is the head of Atari, and he'll be in direct COMPETITION with his old company, Commodore.

What will Tramiel do with Atari? Well, first of all, he FIRED hundreds of Atari employees. Most likely he will bring in his own people who did the job for him at Commodore. There is also a good chance Tramiel will quickly purchase a SEMICONDUCTOR company, just like he did with Commodore. Commodore was so successful because they were making their own CHIPS, so they could manufacture their compuers CHEAPER than anyone. Tramiel has never been fond of VIDEO GAMES, and it is possible that Atari's game machines may VANISH, including the ATARI 7800, which is highlighted in this issue of Computer Games.

There is also the possibility that the ATARI COMPUTER LINE may undergo some DRASTIC changes. They have never made money for the company, and they are being strongly OUTSOLD by the Commodore 64. Also, all the Atari computers are COMPATIBLE with each other, while Tramiel has made the VIC-20, 64, and new Commodore Plus/4 INCOMPATIBLE. The days of compatibility at Atari may be over. If Tramiel decides to take on Commodore for the under $500 computer market, there will be a real WAR out there. He may choose to give Commodore that niche and go after the APPLE and PCjr market with a $600-$800 machine. Tramiel knows Commodore better than anyone, so he'll steer Atari where Commodore is most VULNERABLE. Keep your eyes open for a SURPRISE from the new Atari. If anybody can pull that company out of the FIRE, Tramiel can.

In other news: ACTIVISION has probably released its last VCS game, BEAMRIDER. The company is concentrating on COMPUTER GAMES now, including games on disk for the Commodore 64. They also have a free pamphlet written by DAVID CRANE that will allow you to type in a program that animates PITFALL HARRY. Just send 25 cents for postage to Commodore 64 Club, Activision Inc., P.O. Box 7287, Mountain View, CA 94039.

ADVENTURE INTERNATIONAL is entering the quickly overcrowding EDUCATIONAL software market...MICROLAB has started a game HOTLINE for players who might need a little hint to get through DEATH IN THE CARIBBEAN. Call 312 433-7550...WICO has released their first ARCADE game, ELECTRONIC DARTES...The best arcade games of 1983, according to arcade owners, were: Pole Position, Dragon's Lair, Ms. Pac-Man, Mr. Do!, Galaga, Star Wars, Mario Bros., Q*Bert, Crystal Castles and Joust...COLECO's LASER PLAYER for the ADAM computer did not show up at the Consumer Electronics Show as promised and Scholastic has cancelled plans to publish Adam Family Magazine...One more game that lets you become PRESIDENT--President's Choice, by SPINNAKER. In this one you manage the budget, and you have to take factors like news, weather, and congressional politics into account...EPYX has signed a deal with MATTEL to make "construction set" computer programs out of BARBIE, HOT WHEELS, and G.I. JOE...

That's all, game freaks...

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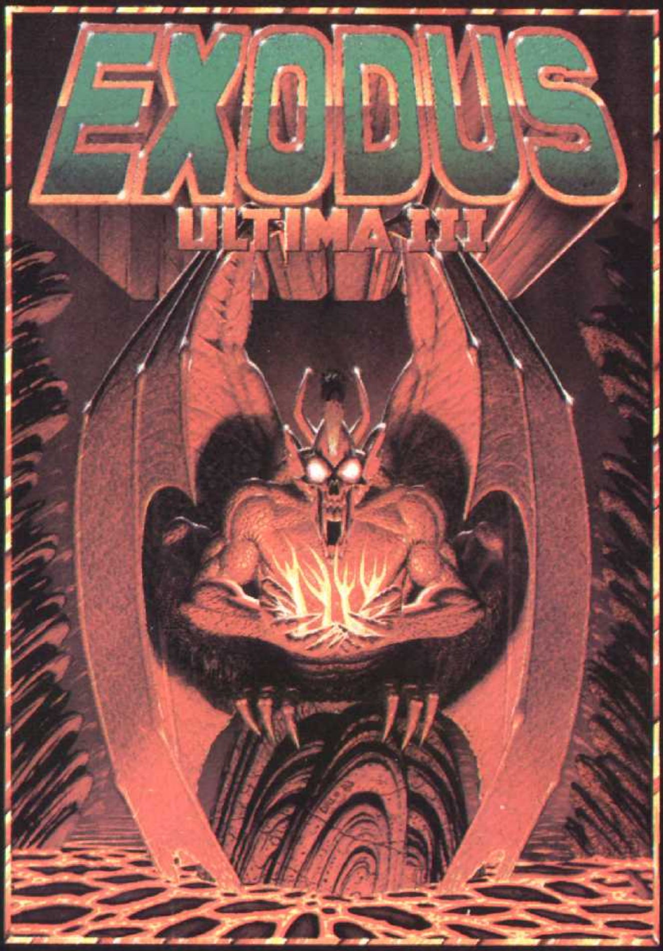

“The world of Ultima III can only be compared to a living tapestry — complex and beautiful . . . This is the best fantasy game in computing. Indeed, it is one of the best fantasy worlds in which to live. Lord British is a veritable JRR Tolkien of the keyboard.” — Popular Mechanics

“Exodus: Ultima III, with a superior plot to match its superior gaming system, is a great game. It upgrades the market; in several ways it sets new standards for fantasy gaming state of the art.” — Softline

“Exodus: Ultima III is Lord British’s magnum opus — so far. It’s fun and exciting to play and constantly intriguing. And the ending is marvelously unexpected and not a bit disappointing — except that it is the ending, and as with a good book, you’ll probably wish there were more.” — Softalk

Available on: Apple, Atari, Com64, IBM

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commodore
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Behind the screens...

MONITORS

Do you really need one?

By Frank Lovece

PHOTOGRAPHS BY JAMES WOJCIK

1 UP 00000
FROGS 4
TIME
FAST
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AMDEK

Monitors are to TV sets what race cars are to station wagons. Properly matched to your needs, a monitor can offer text and graphics capabilities far beyond those of mere mortal TVs. They can even help reduce eyestrain, and thus fatigue—a definite boon when you're going for the *Ultima III* championship or figuring your taxes on April 14th.

As stereo records gradually replaced mono, and as talkies replaced silent movies, monitors are replacing TV sets for computer applications. To help ease the future shock, here are some questions you need to have answered before trading in your Edsel for a Formula One.

What kinds of monitors are there?

Basically, four types: *monochrome, composite-video color, RGB color* and a bastard hybrid, also color, called *video monitor/receivers*. Monitors without composite-video inputs are referred to as "dedicated" monitors, since they're "dedicated" to computer use and can't display TV programs. Monochrome monitors come with white, green or amber screens. Monitors also vary in screen size, picture resolution (measured in "pixels," "dot pitch" and "horizontal resolution-lines"), compatibility with various brands of computers, special features such as glare-free screens and headphones, and, of course, price.

A composite-color monitor, like the Comrex 6500 (right) or the Sakata (below), provides a better picture than a TV, and at a reasonable price.

For crisp, colorful gaming, you can't beat an RGB monitor like the IBM shown below.

Can I use a monitor to watch television?

Unless you have a dedicated monitor, sure. Monitors have no tuner, though, so you have to have some outside source—such as a VCR, a cable converter or a component-video tuner—hooked up that can tune into TV stations and let you change channels. You can't watch TV on monitors that only have RGB inputs, though—these are dedicated to displaying computer images exclusively.

But if you already own a TV set, as does virtually everybody in this country, and you're going to spend the money for a monitor, use the monitor *as* a monitor. Why hook it up to a patchwork of wires and leave it open to interference that'll probably just route your computer signals to a washing machine in Ottumwa?

How do monitors work?

Much the way TV sets do. The inside of the viewing screen is coated with crystalline phosphors, chemical substances that convert electrical energy into light. Behind the screen is a device—called an electron gun—that fires bits of electrical energy at these phosphors. Monochrome monitors have a single electron gun; color monitors have three, one each for red, green and blue light (which can be mixed to create other colors). The electron beam (also called a cathode ray, hence the term "cathode-ray tube," or CRT) scans the back of the phosphor-coated screen, striking minute picture elements ("pixels") as it moves in a fixed pattern. The scan occurs so quickly that each pixel stays lit long enough that our eyes can't detect the flickering that actually occurs.

Will any monitor work with any computer?

Not in any practical sense, though people have been known to jerry-rig things. Fortunately, you don't have to do *too* much mixing-and-matching most of the time, and often you can buy adaptors. You're pretty safe with monochrome and composite-video color monitors—generally, they both use standard RCA phono-plug cables and accept just about any home or personal computer available, short of most RGB computers. RGB computers are optimal with RGB monitors and the few video monitor/receivers that offer RGB input jacks, although it is possible to hook an RGB computer to a composite-video monitor; compatibility varies by computer. Be sure to check before you buy.

What's the difference between "RGB" and "composite-video" color monitors?

Composite-video monitors, whether monochrome or color, generally have but a single video input. RGB monitors, on the other hand, each have a trio of inputs: one for red, one for green and one for blue video signals. Because RGB monitors aren't limited, as composite-video color monitors are, by the specifications of the NTSC television system all TV sets in this country must conform to, RGB monitors can provide superb color and resolution, superb graphics and text capabilities. Accordingly, RGB monitors are more expensive than comparable composite-video monitors.

What are good screen sizes for a monitor?

That depends on what you're using it for. For simple graphics applications, and text applications needing no more than about 40 columns, a nine-inch (diagonally measured) screen is fine. For word processing and spreadsheet uses, you'll want to get a monitor big enough to display 80 columns of text without it making the characters so small you need a magnifying glass. For that, 12-and 13-inch screens fit the bill. The same goes for games.

What should I watch out for to avoid eyestrain?

Staring too hard at computer monitors. That's best avoided by acquiring a monitor that's a) big enough for your needs, b) doesn't flicker and c) doesn't produce fuzzy characters, as composite-video color monitors are often apt to do. In the case of monochrome monitors, get one with a pleasing background color. That almost certainly means green or amber. You might also want to consider getting a monitor with a glare-resistant screen or a glare-resistant screen cover and attaching it yourself.

Which monitor is best for which computer function?

A computer gamer would want a monitor with the best possible color and resolution. That means an RGB monitor, which is the most expensive kind. If they are out of your price range, composite-video monitors are still better than TV sets. For text applications—word processing, financial matters, and the like—a monochrome monitor is probably your best bet. Composite-video color monitors tend to produce fuzzy characters, and RGB monitors are pretty expensive if text is your primary thing.

What should I look for in the store?

Put text on the screen, but also graphics if there's any chance you'll be using the monitor for that. If looking at a color monitor, check for color blemishes where there should be white. If coloration exists, it's a sign of poor electron-beam convergence. Check around the edges to see if any part of the screen display is missing. Stand back and take in the screen as a whole—is it flickering (a sign of potential eyestrain)? Does scrolling or cursor movement leave streaks on the screen? Finally, does the screen *look* right, or do you get the feeling you're looking at a painting that's not hung correctly?

As far as specs go, look up in the brochure or ask the salesperson about: the *horizontal resolution*, a measure of how "tight" the image is, measured in pixels, those all-important pin-pricks of light; and *dot pitch*, a measure of how far apart the pixels are—the smaller the dot pitch, the better the picture resolution.

Can I use a monitor with my ColecoVision or other game system?

Absolutely! Your typical TV set hook-up is usually through that familiar "game/TV" switch that modulates the composite-video output of a video-game console to the RF signals required by most TVs. If your game system has direct, composite-video output, you can connect it directly to the monitor via the monitor's composite-video input, eliminating that little modulator. If your game system has only RF output, you can use the modulator to convert the RF signal to composite video.

What is the price range?

Monochrome monitors can start as low as $100 for a 12-inch green-screen model, such as Leading Edge's Gorilla HRG, and get as high as 1,500 to $3,000 for industrial-strength models. Most mid-priced monochromes fall into the $130-to-$250 range, with Amdek, Hitachi, NEC, Panasonic, Sango, Zenith, Taxan and USI among the brands with models in that area. Composite-video color monitors with 13-inch screens fall mostly in the $300-to-$400 range, with comparable RGB color monitors averaging $150 to $200 higher. These are manufacturers' suggested retail prices, though; actual "street prices" can be 15-35% less, without even considering special sales.

What about warranties?

Ninety-day parts-and-labor warranties abound, though some companies offer better terms. Amdek, for instance, has a two-year parts-and-labor warranty on its monitors' electronics, and a three-year on their picture tubes. Sears and other mass merchandisers often give "full warranties" as opposed to the justly named "limited warranties" that are the norm. Limited warranties have restrictions, so you pretty much have to read the terms carefully. Find out if your retailer has a factory-authorized service department; otherwise, you may have to mail your monitor away and wait weeks for its return. Finally, look into purchasing a service contract, a sort of insurance policy/extended warranty.

COLOR MONITOR SPECIFICATIONS

BRAND/ MODEL	TYPE	SCREEN SIZE	RESOLUTION	SCREEN CHARACTERS	BANDWIDTH	SUGG. RETAIL PRICE
AMDEK						
COLOR I PLUS	*COMP. VIDEO*	*13″*	*260×300*	*40×24 (960)*	*4 MHz*	*$379*
	(GLARE-RESISTANT SCREEN; SPEAKER W/HEADPHONE JACK)					
COLOR II PLUS	*RGB*	*13″*	*560×240*	*80×25 (2000)*	*12 MHz*	*$529*
	(INPUT FOR IBM/APPLE IIE)					
COMMODORE						
C-1702	*COMP. VIDEO (SPEAKER)*	*13″*	*320 HORIZ.*	*40×25 (1000)*	*NA*	*under $300*
COMREX						
CR-6500	*COMP. VIDEO (SPEAKER)*	*13″*	*260×300*	*1500 APROX.*	*NA*	*$324*
NEC						
JC1212MA	*COMP. VIDEO*	*12″*	*250 VERT.*	*40×25*	*NA*	*$399*
PANASONIC						
CTF-1495M	*RGB*	*14″*	*450 HORIZ.*	*80×25 (2000)*	*NA*	*$499*
PRINCETON						
HX-12	*RGB*	*12″*	*690×480*	*80×25 (2000)*	*15 MHz*	*$695*
ROLAND						
CB141	*COMP. VIDEO*	*11.5″*	*270 HORIZ.*	*40×25 (1000)*	*NA*	*NA*
SAKATA						
SC300	*RGB*	*13″*	*700 HORIZ.*	*80×25 (2000)*	*NA*	*$899*
SANYO						
DMC6500	*BOTH*	*13″*	*350×350*	*NA*	*5 MHz*	*$346*
TAXAN						
RGBVISION I	*RGB*	*12″*	*360 HORIZ.*	*80×25 (2000)*	*15 MHz*	*$400*
ZENITH						
ZVM131	*BOTH*	*13″*	*390×480*	*40×25 (1000)*	*6 MHz*	*$379*

SERIOUS SOFTWARE

NEW APPLICATIONS FOR HOME COMPUTERS

GREETINGS, EARTHLINGS

By Shay Addams

Print Shop

Omigod! You forgot to get a birthday card for that rich uncle, and the stores are closed! Any other schmuck would get cut out of the will, but not you—because you've got *Print Shop*. Combining the appropriate features of art and word processing software, it enables even complete klutzes to design and print greeting cards, banners, signs and letterheads.

Entirely menu-manipulated, the program will skip back to the previous selection if you change your mind about the typeface (nine in all) or other aspect of an ongoing design. (And if you're really rushed for time, cards for typical occasions like Christmas, birthdays and Valentine's are provided; they can be personalized with the recipient's name and a message.) When browsing through the list of available borders, you'll see each one wrap around the menu as its name is highlighted by the cursor. Displayed in a small frame, graphics range from simple ornamentation to birthday cakes, roses, menorahs and Christmas trees. (The skull's excellent for death threats.) Unfortunately, you don't see the design's overall appearance until it's printed.

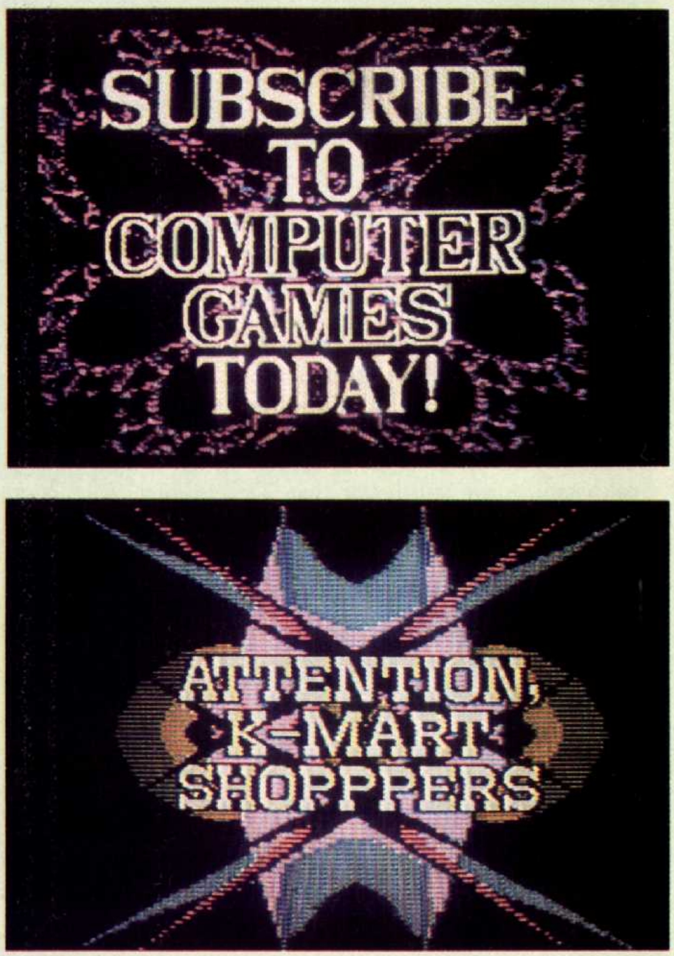
That's not true when printing over the kaleidoscopic variety of patterns that can be conjured up in the Screen Magic mode. There's also a Graphic Editor: you move a dot around and sketch images that can be printed, or saved and used with other cards, signs, etc. A half-dozen of the most popular dot-matrix printers and 10 interfaces are supported, and you can use cursor keys, joystick or Koala Pad for input.

Broderbund, for Apple

Magic Desk I

Dbase II? Who needs it! *Wordstar?* Get that dinosaur outa here! Most people don't need an expensive, full-featured word processor or a complex database—but would like to compose letters, shopping lists and short notes on their computer, and maybe even file some of the information on disk. *Magic Desk I* provides the easy way out, offering universally recognizable graphic icons that lead the way through the steps in creating simple documents and storing them on a floppy.

After you snap in the cartridge and power up, the opening screen shows a brightly colored desk surrounded by a trash can, file cabinet, digital wall clock and a phone. A big hand-shaped cursor, looking like a refugee from some Saturday morning cartoon show, floats in the air. With the joystick, move the hand over the clock and set it so you can consult it for the proper time while working on a letter or something else later on. Then slide the hand over the typewriter and hit the fire button—shoo-wop-dee-wop, you're in type mode! You'll see a standard typewriter carriage on the screen, loaded with a regular sheet of typing paper. The joystick facilitates scrolling around to any position on the paper. No fancy format commands to learn here, just type away. Of course, you don't get search and replace, centering or other *sophisticated* features. But will Aunt Marge know the difference when she receives your thank you note? To print that note, move the hand over the picture of a printer at the bottom of the screen. As with Apple's Macintosh, a trash can icon waits for documents you decide to delete.



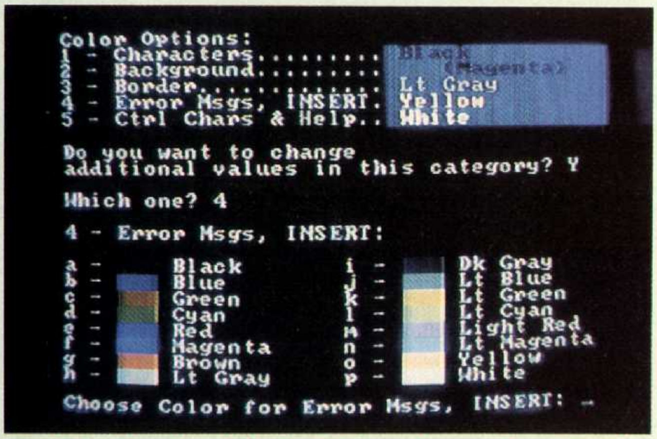
SUBSCRIBE TO COMPUTER GAMES TODAY!

ATTENTION, K-MART SHOPPERS

With Print Shop, *you can create greeting cards, signs and even add personalized messages and art before printing them. It's entirely menu-manipulated, easy enough for an editor to use.*

Filing's simplified, too. Activate the picture of the filing cabinet, and a drawer with ten big yellow folders fills the screen. Documents can be saved in any of the folders, which can be labeled to your own specifications. Each of the cabinet's three drawers holds ten folders, which accommodate ten pages (for a maximum of 300 pages that can be stored on a single disk). The convenient help screen can be consulted by pressing the Commodore key at any time, making *Magic Desk I* notably new-user-friendly. It's a well-designed and practical answer to the less demanding needs of many Commodore owners.

Commodore, for Commodore 64



```
Color Options:
1 - Characters.........  Black
2 - Background.........    (Magenta)
3 - Border.............  Lt Gray
4 - Error Msgs, INSERT.  Yellow
5 - Ctrl Chars & Help..  White

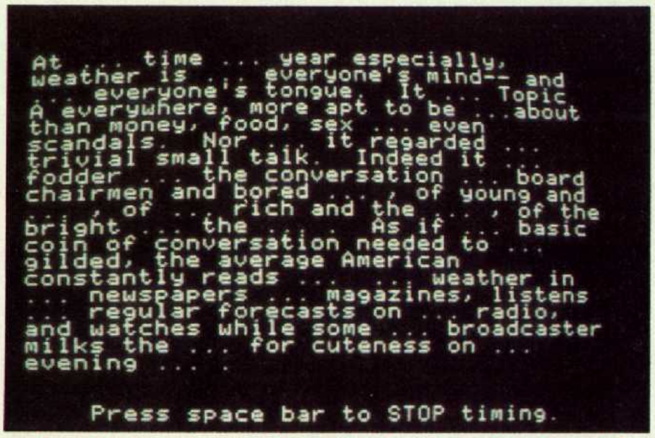
Do you want to change
additional values in this category? Y

Which one? 4

4 - Error Msgs, INSERT:

a -      Black          i -      Dk Gray
b -      Blue           j -      Lt Blue
c -      Green          k -      Lt Green
d -      Cyan           l -      Lt Cyan
e -      Red            m -      Light Red
f -      Magenta        n -      Lt Magenta
g -      Brown          o -      Yellow
h -      Lt Gray        p -      White
Choose Color for Error Msgs, INSERT: -
```

Don't like the color of the text? Pick another one from the color palette offered by The Writer.



```
At ... time ... year especially,
weather is ... everyone's mind-- and
... everyone's tongue. It ... Topic
A everywhere, more apt to be ...about
than money, food, sex ... even
scandals. Nor ... it regarded ...
trivial small talk. Indeed it ...
fodder ... the conversation ... board
chairmen and bored ... , of young and
... , of ... rich and the ... , of the
bright ... the ... . As if ... basic
coin of conversation needed to ...
gilded, the average American
constantly reads ... ... weather in
... newspapers ... magazines, listens
... regular forecasts on ... radio,
and watches while some ... broadcaster
milks the ... for cuteness on ...
evening ... .

     Press space bar to STOP timing.
```

If you'd learned to read fast with Micro SpeedRead, *you'd have finished reading this caption weeks ago.*

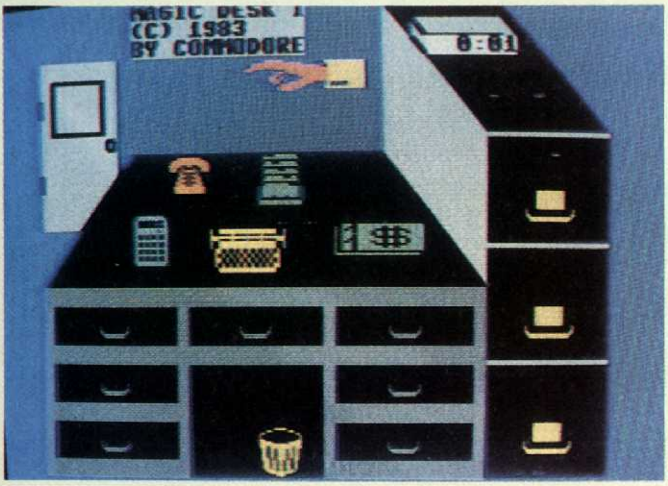
The Writer

A hit on the Apple for years, *The Writer's* a home version of the more powerful *PieWriter* (also available for PC and jr). Though it's been scaled down somewhat, *The Writer* boasts features not found on most comparably priced word processors. A list of names and addresses can be merged into form letters as they're printed. Mailing lists can be hammered out in no time. And for the word-conscious, a simple command produces a rapid word count of the document in memory. These make it strong enough for many small businesses that are run out of the home.

It's essentially three files. The Command Level offers a menu for accessing the various options. From there, you select the Text Editor to compose memos, letters or even longer documents. With a TV, you get a 40-column display; 80 with monitors. A color palette presents a variety of vivid hues from which to choose the colors of the background, text, prompts and other items. Cursoring around a document is a breeze, and search and replace makes editing fast and foolproof. Dot commands, entered by pressing the appropriate function key, indicate new paragraphs, line spacing and other formatting considerations. Centering, underline and boldface are supported for capable printers.

The Text Formatter displays a document exactly as it will appear when printed. In this stage, it's particularly helpful to be able to see underlined and boldfaced phrases stand out in the unique colors you've selected. If all these features seem like a lot to learn, you can always summon the tutorial from disk and learn at your own pace. Help screens sit atop the text window, and you can scroll through them for quick reminders on all the commands, keystroke combinations and various procedures. After mastering them all, you can toggle off the help screens so the full screen's available for text. Files are compatible with PieWriter if you're using that at the office. And one of the sharpest spelling checkers on the market, *The Speller,* is sold separately. For one or two disk drives.

Hayden, for IBM PC, PC XT and PCjr



With icons instead of menus, Magic Desk I *takes the tedium out of writing and filing letters, memos and lists.*

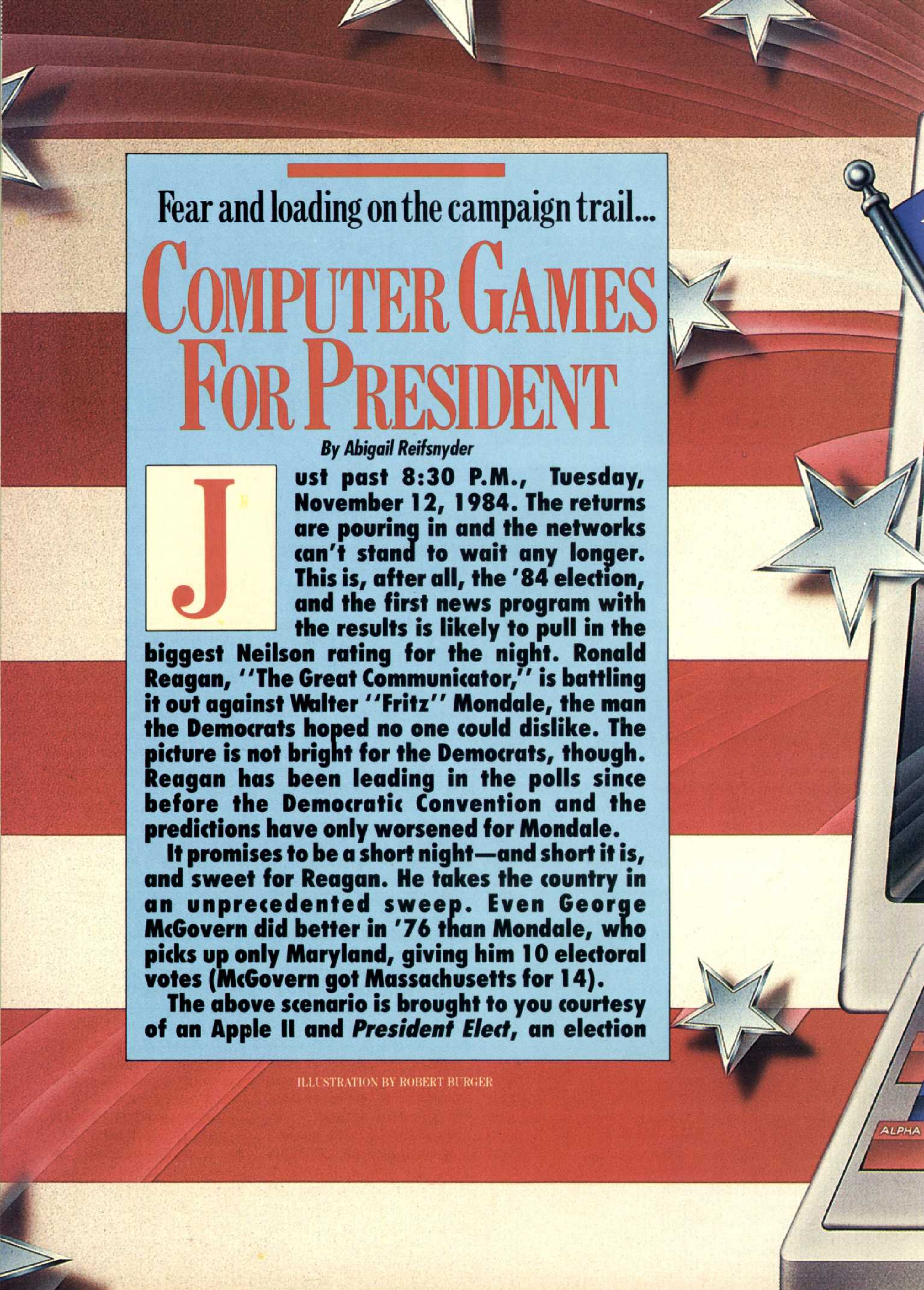
Micro Speedread

There will be about 40,000 books published this year, but you're only going to read 2,500 in your whole life. If that depresses you, speedreading may be the way to go.

Micro Speedread doesn't differ much from other speedreading courses. Instead of reading one . . . word . . . at . . . a . . . time, it teaches you how to train your brain to see clusters of words and read much faster. Several specific strategies are offered, such as the famous "Z-Pattern," in which you train your eyes to scan one line, then to scan the next line backward diagonally, and then to scan the third line. If you've ever seen a speedreader running a finger back and forth down the page, this is what they are doing.

You may ask why you shouldn't just buy an inexpensive book on speedreading instead of a computer program. After all, we do most of our reading from paper, not green screens. But the computer has some advantages over a book. For one thing, the computer has an internal stopwatch to time your reading. It can also instantly calculate your rate of words per minute. Better yet, the computer is interactive. *Micro Speedread* will scroll passages of text past your eyes at whatever speed you choose. And besides, if you had this program, you would have finished reading this issue an hour ago.

CBS Software, for Apple, Commodore 64, IBM PC and PCjr.



Fear and loading on the campaign trail...

COMPUTER GAMES FOR PRESIDENT

By Abigail Reifsnyder

Just past 8:30 P.M., Tuesday, November 12, 1984. The returns are pouring in and the networks can't stand to wait any longer. This is, after all, the '84 election, and the first news program with the results is likely to pull in the biggest Neilson rating for the night. Ronald Reagan, "The Great Communicator," is battling it out against Walter "Fritz" Mondale, the man the Democrats hoped no one could dislike. The picture is not bright for the Democrats, though. Reagan has been leading in the polls since before the Democratic Convention and the predictions have only worsened for Mondale.

It promises to be a short night—and short it is, and sweet for Reagan. He takes the country in an unprecedented sweep. Even George McGovern did better in '76 than Mondale, who picks up only Maryland, giving him 10 electoral votes (McGovern got Massachusetts for 14).

The above scenario is brought to you courtesy of an Apple II and *President Elect*, an election

ILLUSTRATION BY ROBERT BURGER

PRINT
DEL
RES
SET
RUN
MEM
PCS
SUB
LINE
CLM
ALT
INV
ESC
POS
+
−
=
1
2
3
4
5
6
7
8
9
0
1/x
x²
√x
π
×
÷
%
Q
W
E
R
T
Y
U
I
O
P
•
+/-
DELETE
EXC
SUM
RCL
A
S
D
F
G
H
J
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ENTER
DRG
EE↓

simulation put out by Strategic Simulations. It used to be that when someone talked about a political machine he was referring to a system used by certain infamous politicians to stay in office. Nowadays, though, he could just as easily be referring to the computer. Having been Man of the Year in '83, the computer is now in the running for Politician of the Year. In November we'll find out how accurate *President Elect*'s predictions turn out.

Unbiased number-crunching is the computer's forte, making it perfect for simulating the political process. So it should come as no surprise that, with the '84 presidential election approaching (and software manufacturers' penchant for exploiting such events), political games are surfacing. They range from simulations (for the hardcore politico) to arcade action games (for the serious gamer) to tutorials (for the serious).

Without a doubt, the piece of political software most relevant to the presidential election is *President Elect* (for the Apple II line). If you ever wondered what, if anything, Jimmy Carter could have done to win the '80 election, or if one small factor might have thrown the very close '60 election to Nixon instead of Kennedy, this game will help you figure it out. Even if you don't care or know anything about particular elections, the game is fun—it is one of those rare games that is easy to get into but is actually very complex. (In other words, you don't have to read the rules, but you do have to think to play.)

You begin by choosing an election year (data exists for the '60 through '84 elections), then the candidates—either real, fictional or a combination. The computer will control any candidates you or another player don't want to control. There are eight weeks (turns) in which to campaign. At the beginning of the week, each candidate decides such things as how much money to spend on national, regional and state advertising, how many campaign stops to make in a state and a region, and whether or not to debate the other candidate(s). All these factors are then calculated along with the impact of current events to give the pollsters' projections for that week. A map shows which states are leaning in which directions (it helps to have a color monitor for this). Election night can be played out in real time (which takes about four hours), jumping ahead in 10-minute periods, or going directly to the final results.

It is intriguing—even educational—to simulate the same election a number of times, changing different factors each time. For example, I played the '80 election first as Carter. It appears that there was no way at all that Carter could have won. But was it because he was too liberal? The second time I played, I created a democratic candidate who was more liberal than Carter, but a significantly better speaker and not the incumbent. While Reagan started off ahead in the polls, my candidate eventually won by a landslide. (As shown above, though, Walter Mondale has no hope come November.)

> **"Having been named Man of the Year in '83, the computer is now running for Politician of the Year."**

Of course, before you play out the presidential election, you have to know who the candidates will be. *Nomination*, from Brady Software (a Prentice-Hall company) for the IBM PC, simulates both the Democratic and Republican primary elections. In the Democratic primary, you campaign against John Glenn, Walter Mondale, Gary Hart and Alan Cranston. The contenders in the Republican primary are Ronald Reagan, Howard Baker, Robert Dole and Jack Kemp.

A total of 20 state primaries take place over a five-month period (at the end of which the candidate with the most votes wins the nomination). The most crucial factor in winning votes is the public's perception of your background and your presence. So when you are establishing your candidates' positions and backgrounds at the beginning, be sure to answer carefully.

There are three key stages in each month that affect how the public views you. First, after you are shown which primaries will take place that month and the number of votes at stake in each, the press corps asks you two questions. In a clever simulation of the pressure put on candidates to perform on the spot, the game gives the candidate eight seconds in which to read the question and decide among the five possible responses. After answering the questions, you get to see how the newspapers reported the public's reaction to the interviews.

Each candidate must also take a position on a variety of issues ranging from women's rights and abortion to repealing the federal cost-of-living index. (These positions, as in real politics, may be modified each month.)

Finally, each candidate decides on the dispersement of campaign funds for the month. Funds can be spent on TV ads, radio ads, campaign literature and campaign personnel. You may spend as much or as little as you want in each state. The effectiveness of your spending depends on the state's voter profile, your positions, the public's perception of you and the kind of advertising you choose.

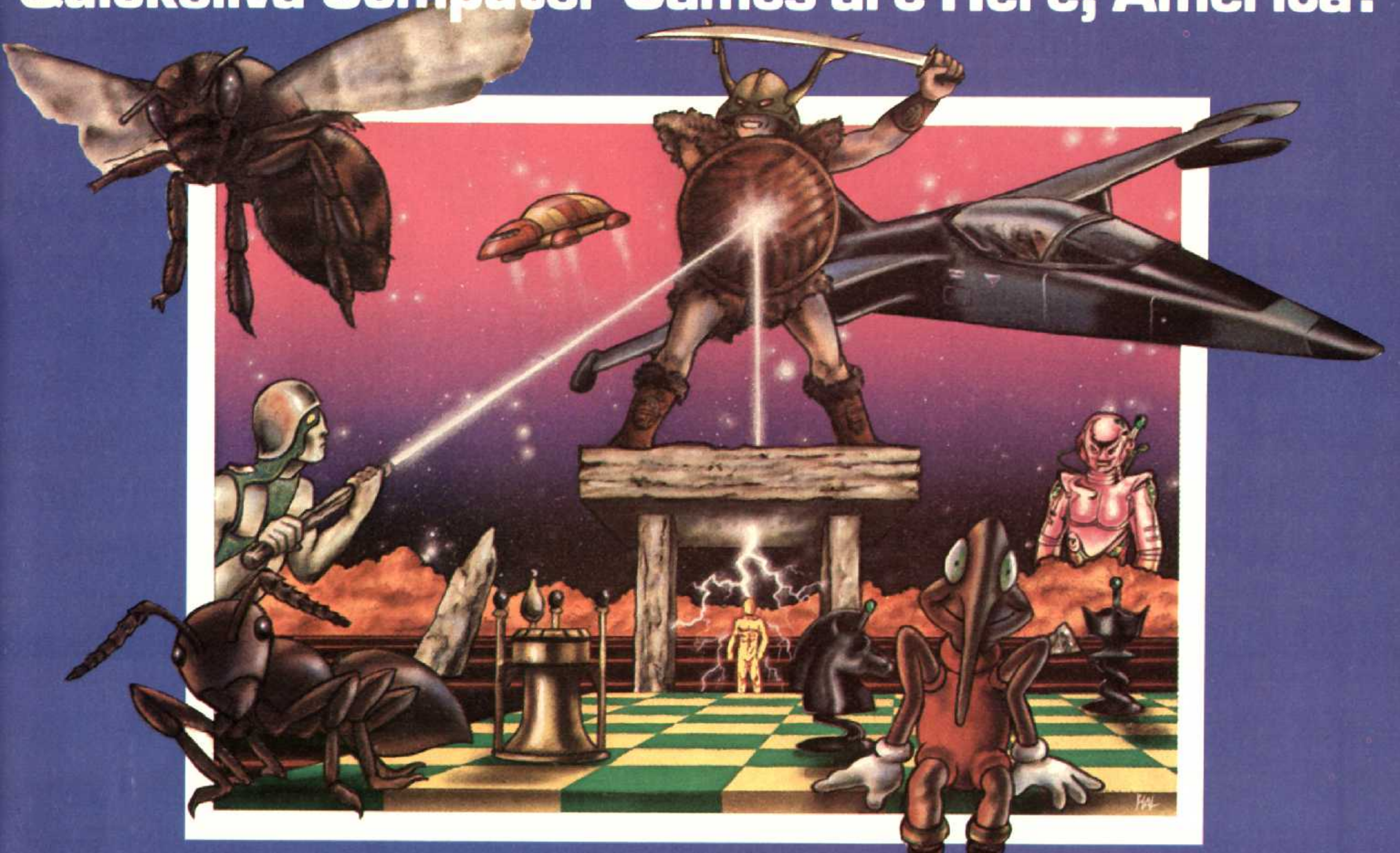
Throughout the campaign, you may have polls and studies done, but it all costs money (and deficit spending is not allowed). Random events also affect each primary's outcome. From time to time, your campaign manager will ask you to decide on some issue. The list of factors goes on and on—there's a reason the game requires 128K. *Nomination* is almost as complex as the real thing, but significantly more fun.

Campaign '84 (for the Adam/Coleco Vision) from Sunrise Software takes the hand-eye coordination approach to the political process. Players choose either the donkey or the elephant, then take positions on eight issues (for example, to prohibit plaid socks or to make oysters the national food). The screen changes to a map of the U.S. (states are not named) where the characters must be maneuvered around the outlines of states, avoiding little red cameras (bad press) and trying to touch white plates (fund-raisers). Nothing is to be taken too seriously here. Bad press consists of such comments as "Your family says they've never heard of you," while fund-raisers cause you to do such things as "score big in Las Vegas" (regardless of where you actually are on the map).

This play continues until your character enters a state by finding the right spot on state outline, causing a picture of the American flag to appear on-screen. This begins the state

CONTINUED ON PAGE 58

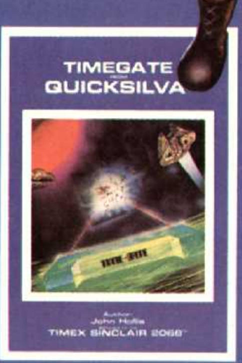
THE BEST COMES WEST
Quicksilva Computer Games are Here, America!



QUICKSILVA computer games — Britain's most popular — are now available in the United States. They feature high quality graphics with European flair and exciting, imaginative scenarios. Here are two examples out of 19 currently available for Commodore 64™ and/or Timex Sinclair 2068™ computers:

BUGABOO by Indescomp — An exciting adventure game where Bugaboo, a friendly flea, is trapped in a cave. You can help him escape by signaling him to jump from ledge to ledge. Making him hop just the right direction and just the right height is the challenge. If you don't, he'll fall back and you have to begin his escape again. And all the time you must help him hide from the fearsome Pterodactyl and hungry Venus Fly Traps. It's fun, colorful and exciting – you'll develop timing and strategy.

BUGABOO
from
QUICKSILVA™
Author
INDESCOMP
TIMEX SINCLAIR 2068™


TIMEGATE
from
QUICKSILVA
Author
John Hollis
TIMEX SINCLAIR 2068™

TIMEGATE by John Hollis — The best selling and longest running mega game in England! It's a four dimension, Space-Time Science Fiction arcade adventure. You are the hero. You must pilot the intergalactic battle cruiser, Void-Runner I, through space and time itself, fighting off the evil Squarm to save the Universe. Your ship is equipped with sophisticated systems, full control panel, radar and exotic weapons; but you must develop the skill and spacemanship to use them effectively. It's a challenge, but the safety of the Universe is at stake.

Ask for these and other Quicksilva games at finer stores.

COMING SOON:
Exciting Quicksilva programs for the Acorn BBC, Atari 400/800/1200, Apple II, Memotech MTX, Sinclair QL and IBM PCjr.

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Atari's bold bid for the ultimate game machine

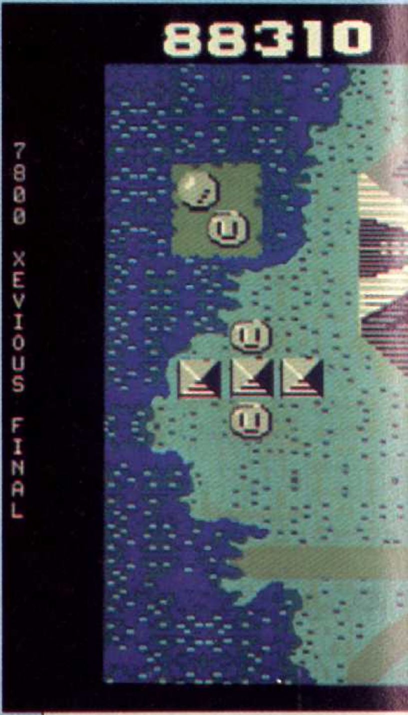
THE 7800

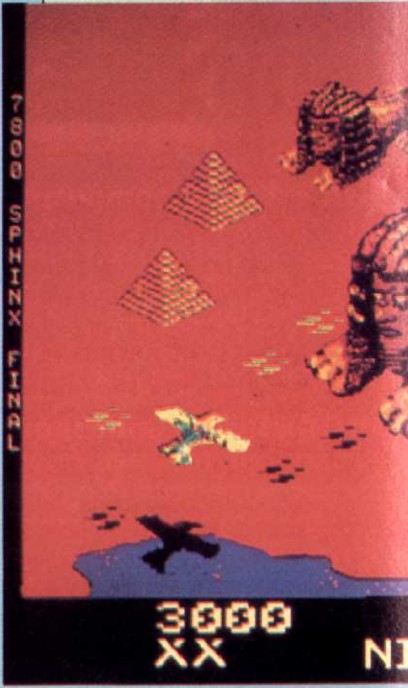
Just when you thought game-only systems were dead, here comes Atari's new $150 7800 ProSystem. As you can see from the screen shots here, the 7800 produces some remarkable graphics—better than anything we've seen on any game system *or* low-end home computer. The 7800 is powered by a new semiconductor chip,—"Maria"—which is capable of moving an astounding 100 objects around the screen at once. It can also display 256 colors, says Atari. The 5200, which moves 20 objects, is being discontinued. The new 7800 will play all 400 or so Atari VCS cartridges, but not Atari computer games.

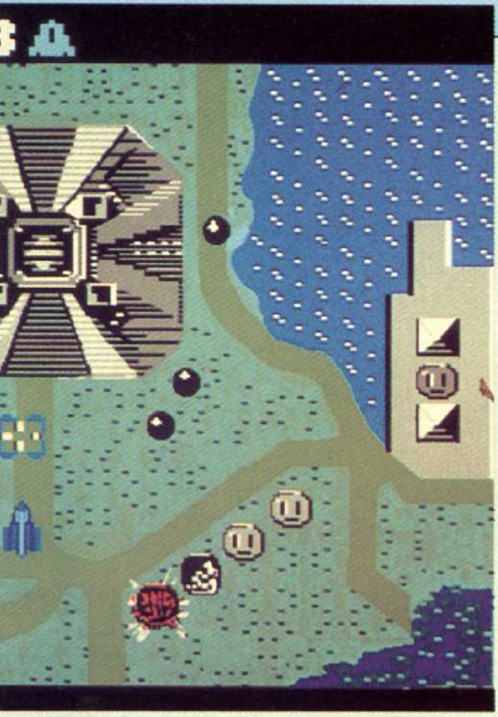
The first batch of games for the 7800 will be enhanced versions of existing Atari games (*Asteroids, Robotron, Ms. Pac-Man, Dig Dug, Joust, Centipede*); the first home versions of arcade titles (*Pole Position II, Xevious, Food Fight, Galaga*); the new Lucasfilms games; and an original title, *Desert Falcon*. Both *Asteroids* and *Centipede* are now capable of putting two players on the screen simultaneously, working against each other or against the computer. *Asteroids* now features 3-D rounded rocks. (The working title was "Meatballs in Space.") *Desert Falcon* looks a lot like *Zaxxon*, but requires a player to pick up jewels as well as shoot things. The 7800 will come packed with a *Pole Position II* cartridge in the beginning. After the first batch, the game will come built-in and explode on the screen as soon as you turn the machine on.

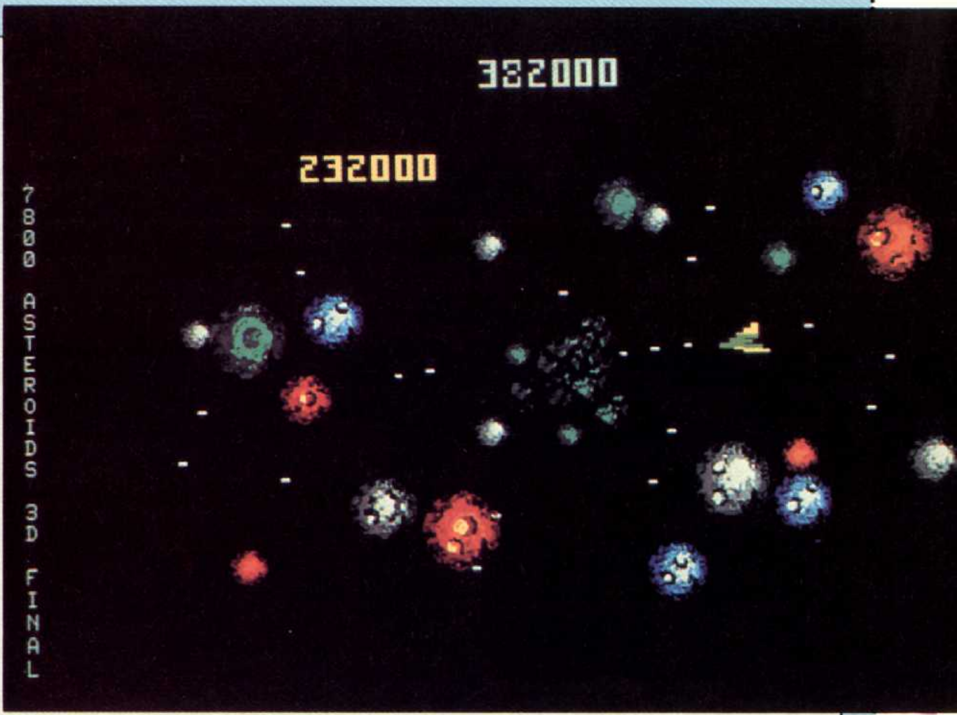
The 7800's joysticks are an improvement on the 5200. The unit is smaller and thinner, with a self-centering stick and independent firing buttons. Atari is also releasing a device for the 7800 called the "Hi-Score cartridge." It allows players to permanently record their best scores for as many as 65 games. The Hi-Score cartridge records the top six scores at each skill level for individual players and teams. Names with up to 30 letters can be used, and the game's color graphics appear on the screen with your name and a triumphant victory tune.

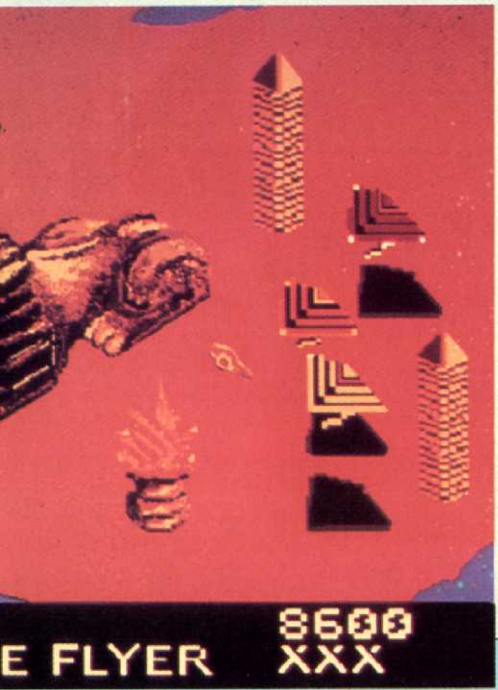
The 7800 can be upgraded to a fully programmable introductory computer. The keyboard unit, which will sell for about $100, will have 62 full-stroke keys, 4K RAM (expandable to 20K), and is compatible with Atari joysticks, Trak-Balls, Touch Tablets and printers. The Atari 1050 disk drive will also work with the 7800. Users will be able to purchase Atari Terminal, a modem which can access mainframe computers, electronic billboards and other information services such as CompuServe. And AtariLab, the









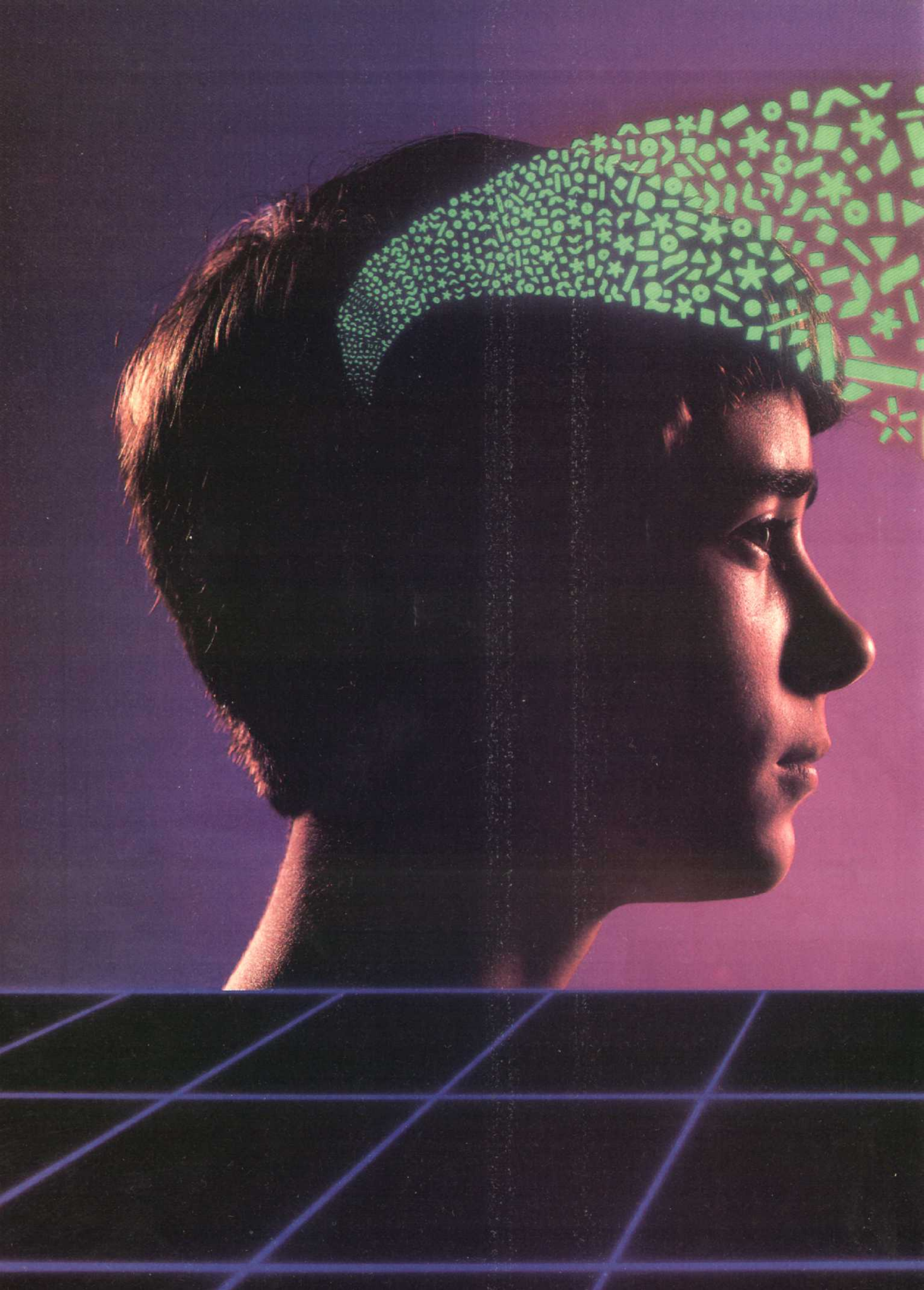


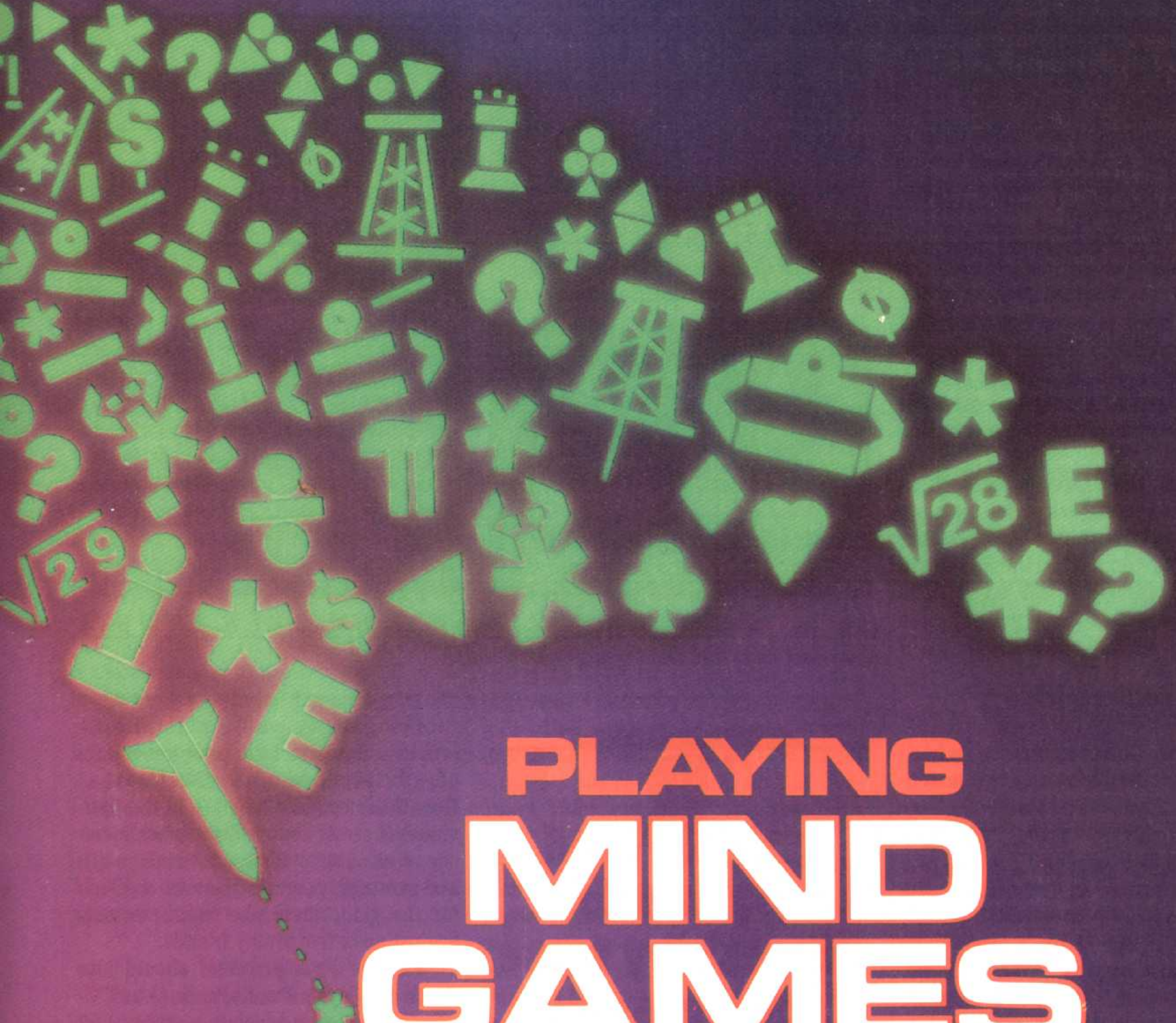
The 7800 ProSystem is even smaller than the old Atari VCS, but it packs a lot more power. The graphics of **Xevious, 3-D Asteroids** *and the only original game,* **Desert Falcon** ***(left)*** *show off the capabilities of the 7800.* **Desert Falcon** *is a Zaxxon-like shooting game. The wings of your bird flap up and down realistically and you can even blow the Sphinx's head off. The 7800 is capable of moving over 100 objects on the screen at once.*

science module that hooks up with the Atari computers, will also be made for the 7800. Atari hints that the 7800 has the potential for "future technologies," but has not given any specifics. Perhaps it's time for laser games to reach the home.

Although Atari doesn't expect much 7800 software from other companies for awhile, they are releasing some of their own. Atari Typing Tutor is a game in which you learn to type while flying a spaceship. *The Word Processor* is, well ...a word processing program. Other educational and personal development software is promised.

We stop short of gushing over this new machine because a little over a year ago Atari announced "the Graduate," which promised to turn the VCS into a computer. It was never released. The 7800 *looks* spectacular. The only question is, will people buy a video game system that can be turned into a computer when they can just buy a computer in the first place?





PLAYING MIND GAMES FOREVER

Drop the joystick and use your brain

By Bob Guerra

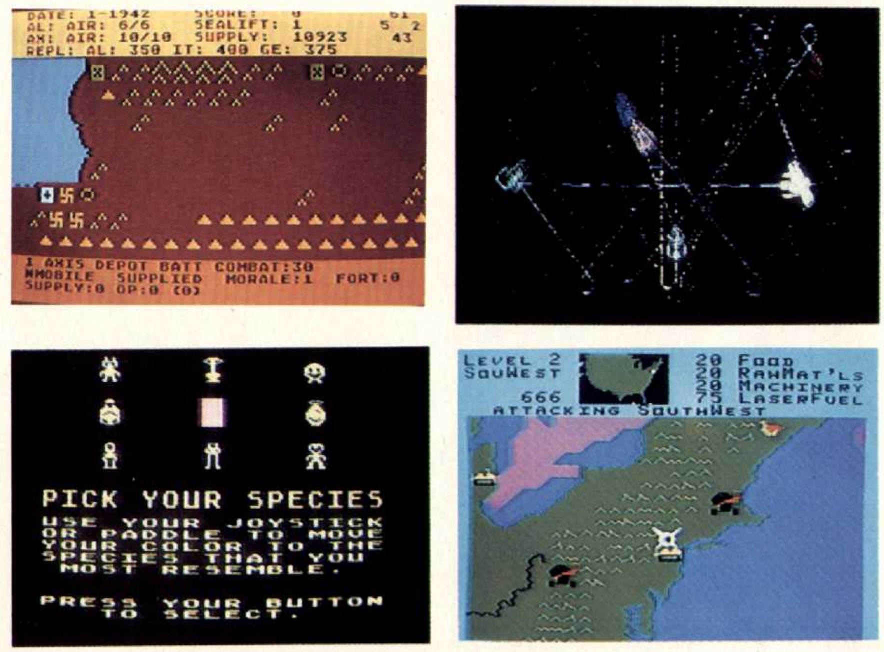
No one's sure why it happens. Some say it's simply a case of laser burnout. Others theorize that after several hundred hours of play, the computer gamer begins to experience guilt over the destruction of countless alien beings and civilizations. Still others are convinced that, tired of being a passive controller of

PHOTOGRAPH BY WALTER WICK

hand-eye coordination, the unstimulated mind rebels, demanding a greater function in game play. Whatever the reason, eventually most computer gamers find that maze games, climbing contests and shoot-'em-ups fail to provide the thrill of victory, agony of defeat and all-around fun that's essential to a healthy computer/owner relationship.

If you've become bored with the arcade games your computer plays with you, don't trade 'er in for a newer model. What you need is some software that exercises your brain instead of your joystick. There's a wide assortment of intellectually stimulating programs available to give any bored computer gamer reason to cerebrate.

Although adventure games such as Infocom's excellent **Zork** series certainly give players a lot to think about, previous *CG* articles have examined these games in depth. The purpose of this article is to acquaint you with other types of "mind games" that are available.


DATE: 1-1942 SCORE: 0
AL: AIR: 6/6 SEALIFT: 1
AX: AIR: 10/10 SUPPLY: 10923
REPL: AL: 350 IT: 400 GE: 375
1 AXIS DEPOT BATT COMBAT:30
MOBILE SUPPLIED MORALE:1 FORT:0
SUPPLY:0 OP:0 (0)
PICK YOUR SPECIES
USE YOUR JOYSTICK OR PADDLE TO MOVE YOUR COLOR TO THE SPECIES THAT YOU MOST RESEMBLE.
PRESS YOUR BUTTON TO SELECT.
LEVEL 2
SOUWEST
666
20 FOOD
20 RAWMAT'LS
20 MACHINERY
75 LASERFUEL
ATTACKING SOUTHWEST

Clockwise, you see **Knights of the Desert** *(SSI)*, **Moondust** *(Creative Software)*, **M.U.L.E.** *(Electronic Arts) and* **War Room** *(Probe 2000).*

Puzzles & Trivia

Several programs borrow from the TV game show *Concentration*, which required contestants to find two matching prizes hidden under squares of a large grid. As matches were made, the squares were flipped over to reveal portions of a rebus. The contestant who made the match had a chance to solve the puzzle. Well, if you're one of those people who couldn't resist playing along at home, you'll love **Match Wits** by CBS Software (Apple, Atari, C-64, IBM).

Match Wits lets you choose a category such as animals, famous people, cities, etc., and the type of matches you'll be required to make. Points are awarded for making pairs and correctly solving the puzzle. You can even customize the game to your own tastes.

Similar games include Broderbund's **Matchboxes** (Atari, C-64), in which pictures must be matched by color and an accompanying tune, **Master Match** by Advanced Ideas (Apple), and **Square Pairs** by Scholastic, Inc. (Apple, Atari, C-64, VIC-20, TI 99/4A). With *Square Pairs*, the emphasis is on education.

If you'd rather tease your brain with questions about obscure baseball stats, little-known movie titles or other tidbits from the areas of politics, entertainment and history, there are a number of computerized trivia games available to jar even the best memories.

With over 6,000 questions on a variety of topics, Counterpoint's **Quizagon** (Apple, C-64, IBM, VIC-20) is one of the most challenging trivia contests available. Apple and C-64 owners can stimulate some fierce competition with **Fax** by Epyx. This arcade adaptation lets contestants compete to see who can answer multiple-choice questions the fastest.

"Bored by arcade games? Try some software that exercises your brain instead of your joystick."

Finally, there's a trivia game just for die-hard Beatle fans. **Beat The Beatles** by Interactive Software (Atari) is the perfect game for all you fanatics who eagerly awaited the release of new albums from the Fab Four so you could scrutinize the jackets, steam off the labels and play the thing backwards hoping to find "Paul is dead" clues. There's even a secret message that is only revealed when all the questions have been correctly answered.

For geniuses who can solve logic problems but have little prior knowledge of anything, there's **Intellectual Decathlon** by Muse (Apple). In ten individual contests that will test your memory, reasoning ability, arithmetic skills and strategic powers, you can compete for the gold, silver and bronze medals against up to five brainy friends.

Fans of logic problems should also check out Epyx's **PuzzlePanic** (Atari, C-64). The program involves a maze of 50 logic games that must be played and solved in the correct order. The more you play, the more clues that are revealed to guide you down the right path.

Strategy & Board

Maybe you'd feel more comfortable with an old-fashioned game of cards, chess, backgammon or Scrabble. Most such programs allow you to set the computer on a nice easy level that you can consistently beat. This is great for the old ego—especially if you've just been humiliated by a computerized trivia game.

If you've always wanted to learn about that wild new party game, Standard American Contract Bridge, there's **Charles Goren: Learning Bridge Made Easy** by CBS (Apple, C-64, IBM). Take Goren's advice on bidding and rebidding, trumps and tricks, and you'll never have to play the dummy again.

Or maybe you'd rather learn how to get thrown out of casinos. No, you don't have to get drunk and obnoxious—just boot up **Ken Uston's Professional Blackjack** by Screenplay (Apple, Atari, C-64, IBM, TRS-80) and discover the card-counting systems that made Uston a wealthy man.

Chess enthusiasts will enjoy a match with Hayden's **Sargon II** (Apple, Atari, C-64). **Sargon III** is more versatile, allowing you to play against a human opponent and save ongoing games to disk.

If you like the strategy of chess but find the going a little too slow, try **Archon** by Electronic Arts (Apple, Atari, C-64, IBM). In this contest of magic and sorcery, you don't simply surrender the square when attacked. You fight it out in the Combat Arena. Unicorns, basilisks, shapeshifters and other legendary forces clash in a battle for control of the board's five power squares. If there is such a thing as a computer classic, this is it.

Other board games that have been brought home for your computer include Odesta's **Odin**. Similar to the neo-classic *Othello*, *Odin* is available for all major home computers and gives you 16 skill levels to choose from. The best part is, you don't have to turn over each of those little two-colored disks by hand.

Monty Plays Scrabble by Ritam (Apple, TRS-80) is a computerized version of the popular board game. You can play against a friend or Monty. He has a 32,000-word vocabulary and you can program him to be really stupid.

Simulations

The most popular board game of all time is Monopoly (like Scrabble) which let us in on the wheelings, dealings and million-dollar decisions of land tycoons. Today, there are business simulations for all home computers that let you invest in the stock market, run your own airline or manage a major oil company. Creative Software's **In the Chips** (C-64, IBM, VIC-20) starts you out with $100,000 and your own software company. It's up to you to develop new products, control production and set prices in order to run a profitable business. One of the best stock market simulations is **Millionaire** by Bluechip (Apple, Atari, C-64, IBM, TRS-80). As the name implies, your goal is to make a million dollars by investing $10,000 in the stock market. Well-known stocks and financial news flashes combine to make *Millionaire* both entertaining and educational.

Both **M.U.L.E.** by Electronic Arts (Atari, C-64, IBM) and **Run for the Money** by Scarborough (IBM) take business simulations and blast them into outer space. *M.U.L.E.* is a race to colonize a distant planet through mining, producing food or energy and skillfully managing your land while weathering natural disasters.

Not all computer simulations deal with the business world. Flight simulators such as MicroProse's **Solo Flight** (Atari, C-64, IBM) and Sublogic's **Flight Simulator II** (Apple, Atari, C-64) put you in the cockpit of a plane and let you fly under a variety of conditions using the actual instrumentation found in real planes. Both programs are less expensive than real flying lessons, and a lot safer. [See *One On One*, this issue.]

Wargames

Finally, a category for computer hawks who seek intellectual stimulation but still enjoy solving international misunderstandings with military might. The two largest manufacturers of computerized war games, Strategic Simulations and Avalon Hill, have produced a wide variety of conflicts that let you battle the enemy on land, in the skies and on the high seas. Practically every major war is faithfully recreated, from the 18th century to the present. There are even future scenarios you can play out, such as **Germany 1985** and **RDF 1985** from SSI's "When Superpowers Collide" series.

Some of SSI's other programs let you recreate the Battle of the Bulge with **Tigers in the Snow** (Apple, Atari, C-64), participate in Rommel's North African campaigns of 1942 with **Knights of the Desert** (Apple, Atari, C-64), and relive four crucial World War II naval battles with **Carrier Force** (Apple, Atari). All are historically accurate, and involve strategic control of troops.

Some of Avalon Hill's offerings are **Tactical Armor Command** (Apple, Atari, C-64, IBM), a World War II game in which you control German, British, Russian or American forces; a simulation of Napoleon's 1814 campaign against the invading Austrian, Prussian and Russian Armies called **Paris in Danger** (Atari); **Fredericksburg** (Apple, Atari, IBM, TRS-80), based on the famous battle of the Civil War; and the ever-popular **Nukewar** (Atari, C-64, TRS-80, VIC-20) —this light-hearted contest lets you defend your country by building a massive arsenal of fighters, bombers and subs.

Although Avalon Hill and SSI lead the pack when it comes to war games, other manufacturers are starting to get in on the action. Some warfare programs include Broderbund's **Opertion Whirlwind** (Atari, C-64), **NATO Commander** by MicroProse (Atari, C-64) and Adventure International's **War** (Apple, Atari). No matter which war game you decide to conquer, remember, if captured just give your name, rank and high score.

More Mind Games

Puzzles & Trivia

Memory Twister—Pyramid Software (C64); The Game Show—Advanced Ideas (Apple, C64, IBM); Fun With Facts—Advanced Ideas (Apple, C64, IBM); Brain Storm—Pixel (Apple); Triple Brain Trust—Reston Software (IBM); Millionwaire—Brain Bank (Apple); Trivia—Cymbal Software (C64); Puzzle Mania—Reader's Digest (Apple, C64, IBM); British Heritage Jigsaw Puzzles—Thorn EMI (Atari); European Scene Jigsaw Puzzles—Thorn EMI (Atari).

Strategy & Board

Bridge 4.0—Artworx (C64,VIC20; Bridge 64—Handic Software (C64); Solitaire & Cribbage—Datamost (Apple); Cribbage & Dominoes—Thorn EMI (Atari); Strip Poker —Artworx (Atari); Draw Poker—Avalon Hill (IBM); Chess 7.0—Odesta (Apple, Atari, C64, IBM); Chess—Parker Brothers (Atari, IBM); Cyberchess—Cyber (Apple, C64, TRS-80); TI Video Chess—Texas Instruments (TI99/4A); Checkers 2.1—Odesta (Apple, Atari, C64, IBM); Fortress—SSI (Apple, Atari, C64); Backgammon 2.0—Dynacomp (Apple, Atari, C64, IBM, TRS-80); Fastgammon—Quality Software (Apple, Atari); Microgammon—Artsci (Apple); Backgammon—Odesta (IBM); Q.S. Reversi—Quality Software (Apple, Atari); Pensate—Penguin (Apple, Atari, C64).

Simulations

Tycoon—Bluechip (Apple, Atari, C64, IBM); Baron—Bluechip (Apple, C64, IBM); Computer Stocks & Bonds—Avalon Hill (Apple, Atari, C64, IBM); Airline—Adventure International (Atari, C64, TI99/4A, TRS-80); Oil Barons—Epyx (Apple, IBM); Chancellor of the Exchequer—Mach-Ina (Atari); Geopolitique 1990—SSI (Apple, C64); L.A. Land Monopoly—Softsmith (Apple); T80-FS2 Flight Simulator—SubLogic (TRS-80); IFR Flight Simulator—Academy Software (C64, VIC20); Flight Simulator—Microsoft (IBM).

War Games

Combat Leader—SSI (Atari, C64); B-1 Nuclear Bomber—Avalon Hill (Apple, Atari, C64, IBM, TI99/4A, TRS-80); Battle For Normandy—SSI (Apple, Atari, C64); Legionnaire—Avalon Hill (Apple, Atari, C64); Close Assault—Avalon Hill (Apple, Atari, TRS-80); London Blitz—Avalon Hill (C64); Panzer-Jagd—Avalon Hill (Atari, C64); VC—Avalon Hill (Apple, Atari, IBM, TRS-80); Dnieper River Line—Avalon Hill (Apple, Atari, IBM, TRS-80); Eagles—SSI (Apple, Atari, C64); Fall Gelb—Simulations Canada (Apple); Grey Seas, Grey Skies—Simulations Canada (Apple).

Oh, and one more thing—if your brain numbs up from all these mind games, dust off that old *Defender* and wail on it.

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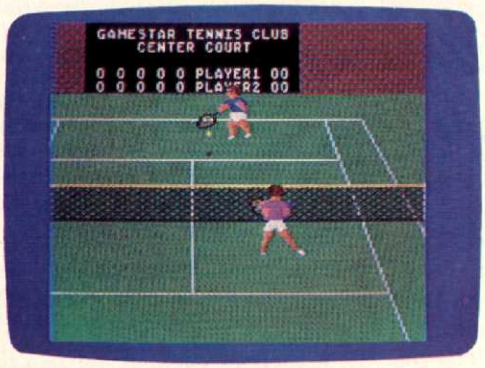

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Actual Commodore 64™ screen—Other versions may vary

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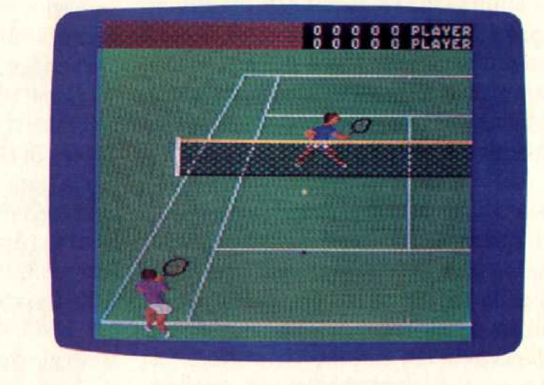

ON COURT™ TENNIS
Actual Commodore 64™ screen—Other versions may vary

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CAN YOU SURVIVE?

SPY HUNTER

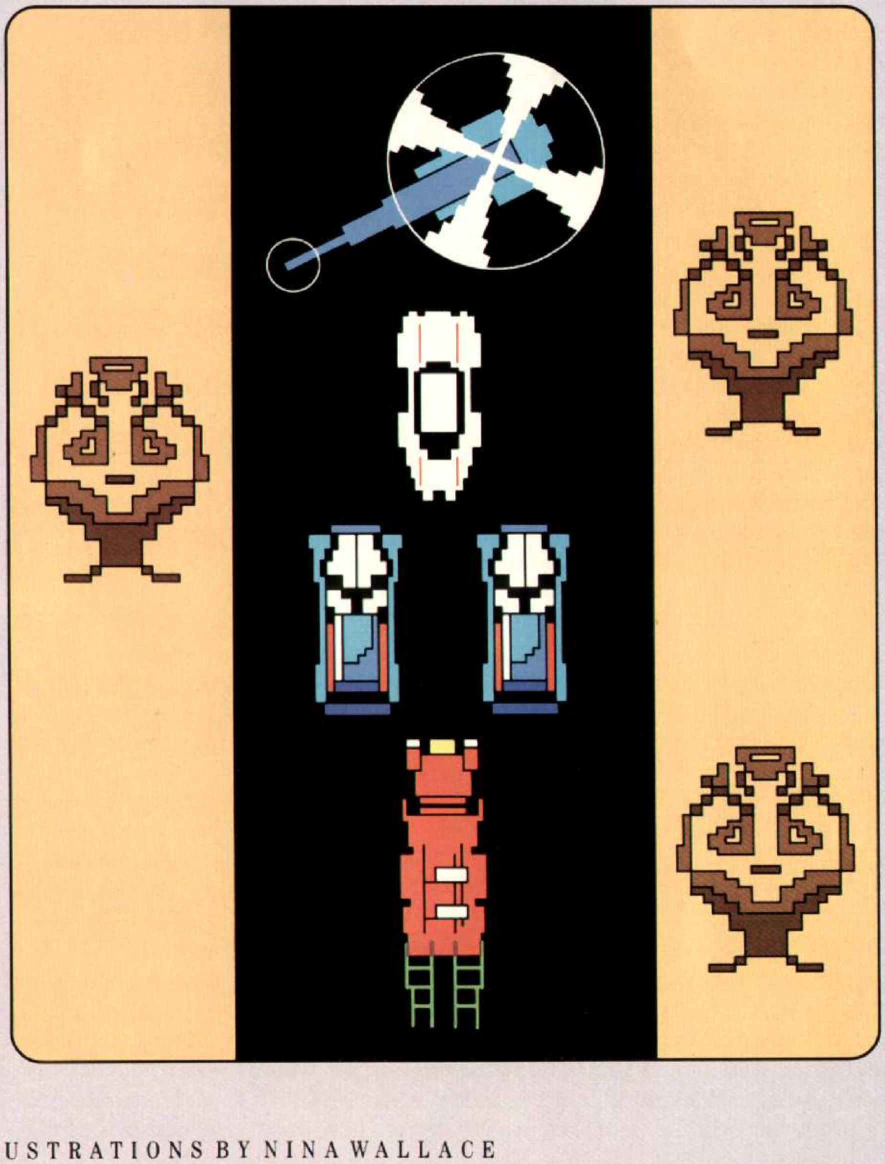
Most arcade games are straightforward—the players with the quickest hands and the quickest minds achieve the highest scores. But sometimes a game will have a hidden trick in the program that will allow *anyone* to rack up big points—*if* they know the trick. Here is a situation that involves one of these devices. Would *you* be able to use it?

THE CRISIS:

You've summoned the weapons van, but two spy cars won't let it through. You've run out of oil slicks, smoke screens and missiles. To make matters worse, a helicopter has just joined in the chase. What to do?

THE SOLUTION:

Don't floor it—you'll just crash. Maneuver your car so there's nothing directly behind it for a second. Then by taking your foot quickly off the accelerator, you'll stop and the cars and weapons van behind you will slide right past. Drop it into low and slide up the ramps into the van, and safety.



ILLUSTRATIONS BY NINA WALLACE

BEAT IT! ZAXXON

By Bob Guerra

When *Zaxxon* first appeared in arcades, people were stunned by the fantastic graphics and three-quarter perspective. For many people, though, the game was as difficult as it was beautiful to look at. For the first time, your ship reacted like a real aircraft—climbing as you pulled the joystick back, and swooping downward when the stick was leaned forward. In addition, an altimeter was provided that was more than merely decorative. To survive, you had to learn the proper readings in order to slip through small openings between force-fields.

Although the new Commodore 64 version by Synapse is not an exact duplicate of the original, it actually improves on the coin-op by giving you more precise control and better graphic representation of your ship's location. Those who've mastered the coin-op, however, might argue that these changes don't make *Zaxxon* any better—just easier.

Whatever the case, the object of the game has remained intact—destroy the powerful robot Zaxxon by penetrating his fortress and scoring direct hits on his missile launcher. Along the way you must survive attacks by enemy guns and guided missiles while destroying fuel tanks to replenish your own shuttlecraft's supply. Between fortresses there is a deep space dogfight where it's you against up to eight enemy planes.

> **"Sweep wide to the left destroying everything in your path. Stay low and you'll avoid the guided missiles."**

STRATEGY

Since you begin with three ships and receive only one additional ship at the 20,000-point mark, make each one last as long as possible. You must be able to strafe the Asteroid City, perfect your dogfighting skills in Deep Space and precisely maneuver your craft through openings in the electrified walls of Zaxxon's fortress. Surviving the entire scenario through four or five levels will guarantee you a score that's out of this world.

ASTEROID CITY

When the game begins, bring your shuttlecraft up to maximum altitude and as far right as possible. Once you pass over the wall, descend to the lowest level and begin blasting away. Sweep wide to the left and then back to the right, destroying everything in your path. By staying low, you will avoid guided missiles, which can't fly as low as your plane.

After flying over the small wall, you can descend and, again, sweep left and then right. If you occasionally fly slightly above the lowest altitude, you will be able to destroy gun emplacements that are firing at you, while their shots pass harmlessly below your plane.

Try to destroy as many grounded enemy planes as possible, because every plane you wipe out on the asteroid will be one less you'll have to fight out in space. The first time through, however, you'll only be in space for a limited amount of time no matter how few planes you shoot down. You should, therefore, go after the big points rather than concentrating your efforts on shooting all the planes.

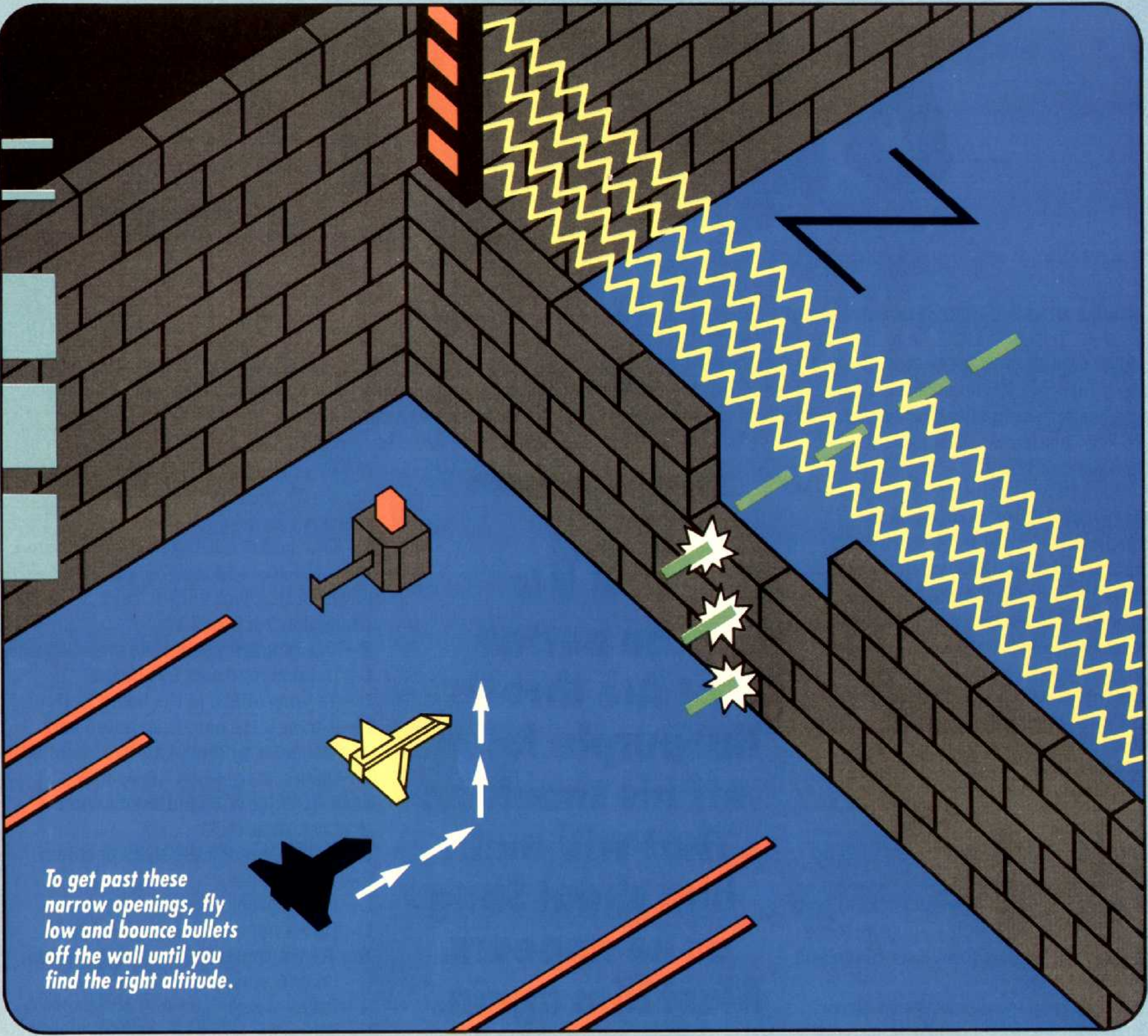
One of your best sources of points will be the radar towers. They're worth 1,000 points, which is the same amount you get for wasting Zaxxon himself. The one you hit as soon as you come over the first wall is easy, but two others on the first asteroid can be tricky. The first is on the left, just past the force-field. By gliding over the top of the force-field as low as possible and swooping quickly downward, you can hit the tower before continuing on to the airstrip at the right. After strafing as many grounded planes as possible, blast the final tower at the end of the runway. Be sure to begin climbing as soon as you've hit the radar tower, to avoid colliding with the last wall of the asteroid.

DEEP SPACE

The dogfighting sequence is, in many ways, the most difficult part of the mission. As a general rule it's a good idea to stay low when the enemies are high, and high when the enemies are low, firing constantly. This way, you'll be able to hit them as they change altitude. Although there are no shadows in space, you'll be able to gauge your altitude by the size of your plane and by using the altimeter.

Since you have more control over altitude than your enemies do, you're less likely to get hit during changes in altitude. The enemy planes have all kinds of mobility at one altitude, however, so you'll have to watch out for them backing into you from the bottom of the screen.

Satellites can only be destroyed when you're at the highest altitude, but since they're only worth the amount of three enemy planes, don't go after them if the enemy planes are up high. Remember, the first time through you don't have to eliminate the full quota of planes shown under the "EP" on



To get past these narrow openings, fly low and bounce bullets off the wall until you find the right altitude.

your instrument panel. Therefore, make survival your primary objective at this point.

THE FORTRESS

Following the dogfight, you'll approach Zaxxon's fortress. Again, by staying high and to the right you'll be able to get over the first wall with no problem. The rest of the fortress consists of regularly spaced walls dividing the asteroid into several sections—each one containing an assortment of fuel tanks, radar towers and gun emplacements.

Since each wall has an electric barrier at the top, with only a small opening below the barrier to fly through, your first concern should be finding your way through this opening. As you approach each wall from a low altitude, try to align your ship horizontally with the opening. Then fire like crazy while watching the wall to see where your shots hit. Bring your plane up until you see your gunfire passing through the opening and then hold 'er steady until you're on the other side.

Once you familiarize yourself with the fortress and can find your way through the openings quickly and easily, you'll be able to sweep down and strafe most of the fuel tanks, radar towers and guns before climbing to pass through the opening. When you reach advanced levels, the strafing of fuel tanks will be especially important, because you'll start to burn fuel at a tremendous rate.

When you've made it past the final wall, there'll be just three more fuel tanks and an easily avoided missile between you and Zaxxon. When you see the grid of squares on the asteroid floor, start blasting away as the robot rolls into view. By scoring three direct hits on the missile-launcher on Zaxxon's left side (your right), you'll destroy him and move on to the next round and increased difficulty.

Although the second board is set up differently than the first, from here on out all odd-numbered boards will be similar to the first, and even-numbered boards, to the second. The game's difficulty levels off after about the fifth or sixth board, with the greatest problem being the increase in fuel consumption.

If you make it this far, give yourself a pat on the back (just remember to pause the game first). According to Peter Adams, designer of the C-64 version, only first-rate players ever make it past level four.

MINIMUM SCORE POTENTIAL: 75,000

BEAT IT!

SPACE ACE

Unlike *Dragons's Lair, Space Ace* doesn't have one definitive solution. To begin with, the game features three skill levels—Cadet, Captain and Space Ace. Secondly, within each level there are several scenes that can be avoided altogether by simply not "energizing," or by taking an alternate route. There are even instances when more than one move will produce the same correct result.

The following solution provides one of the quickest ways to successfully complete the Cadet level. Because it eliminates several scenes, there are fewer moves to make and your score, although impressive, won't be the maximum possible. First you are given the correct joystick move—U (Up), D (Down), L (Left) or R (Right). Firing Ace's laser pistol or energizing will be listed as B (Button). After the move, a description explains specific timing and its purpose.

> **"Hit the button as Ace throws the purple felines off his shoulder. That will make him shoot Shag as he appears. Blast him again."**

TO THE SPACESHIP

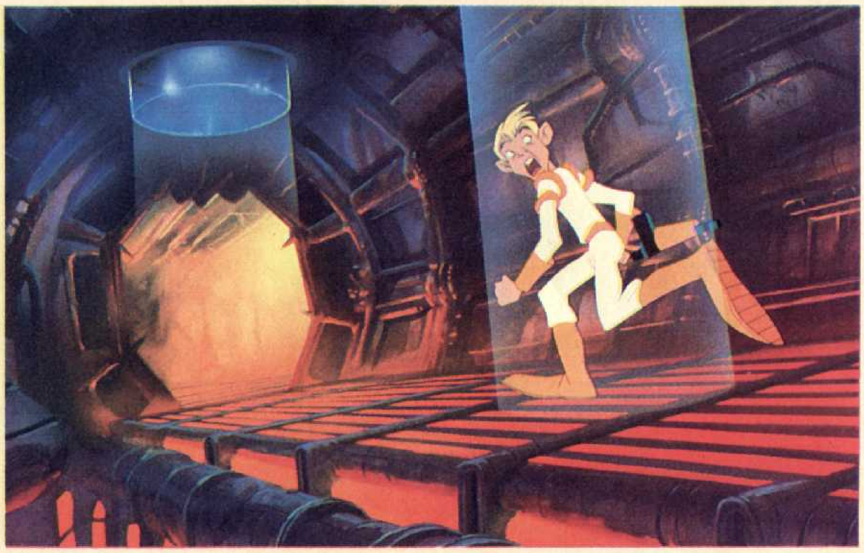
R—When Dexter jumps off the large rock (to jump out of the line of fire).
L—Once Dexter's on the opposite ledge (to move him away from laser blasts and toward his ship).
L—Once Dexter reaches the small rock. (Although it says "energize," just wait and he'll come to the stomping droids.)
L—Right after first stomper lifts for the second time.
L—Likewise for the second...
L—The third...
L—And the fourth. Now you get to rest until Kimmy says "GET ME OUT OF HERE!"

FLYING TO BORF

U—To avoid crashing.
L—To avoid crashing.
U—To avoid crashing.
B—To shoot the large ball.
L—To avoid crashing.
B—To destroy second large ball.
D—To avoid crashing.
B—Wipes out the final ball.

ONCE INSIDE

U—To move down hallway.
R—To take corner.
U—To continue down the corridor.
U—After Dexter runs over the green platform.
B—To energize. Then wait until after Ace laughs.
R—To take corner.
B—To blast enemy guard.
L—Takes another corner.
U—When you see Ace in front of round opening.
B—To shoot second enemy guard.
R—After Ace turns back into Dexter.
R—After Dexter sees Kimberly on Big-Screen TV. (He'll run through two rooms.)
L—The instant the laser fires the second time. (Dexter will land on a floating platform that looks like a short triangular fret board.)
R—The moment the second board appears.
L—To jump onto new fret board.
U—To jump ahead to the board in front.
L—Dexter leaps onto final board and approaches a landing with two openings.
R—Immediately when the openings flash. (Dexter will land among some shaggy creatures.)
U—To run through the small opening.
R—Takes corner.
L—Takes corner.
U—Instead of energizing, go forward. You'll save yourself a lot of aggravation.
L—Takes corner.
R—Takes corner.
U—When Dexter comes to a stop.
U—Again, when he's about to stop. (To climb into his spaceship. Dexter will fly off and land on another small planet. After climbing out of the ship, an ugly black-tentacled creature will approach Dexter from behind.)
B—To fire when the creature touches Dexter's shoulder.
U—To run away from the big orange Shag.
B—To energize.
B—As soon as Ace throws the purple felines off his shoulders. (This will cause him to shoot Shag as soon as he appears.)
B—To blast Shag again. (Fire as Ace runs into Shag's arm.)
L—When Ace turns back into Dexter and lands on the crumbling cliff. (As Dexter escapes, he will accidentally fall into a narrow spiked opening that's about to close on him. Fortunately, there's a rope.)
L—To reach over to the rope. When Dexter gets out he'll see what appears to be Kimberly standing on a ledge.
B—Right after Kim says "Beware your dark side."
L—To climb through hole.
D—As Dexter sinks into the water, move him downward when the screen says "energize."
L—To escape from multiple dark sides.
L—Again, and quickly, so you won't get blasted by the multiple dark sides.



Space Ace is the follow-up to Don Bluth's phenomenal Dragon's Lair—the first laser-disc arcade game. Space Ace virtually eliminates the annoying break between images in Dragon's Lair, and features several different routes you can take to get to your final destination—killing Borf.

MOTORCYCLE SEQUENCE

After sliding down a shoot, Dexter will land right on the seat of a motorcycle.

R—As soon as Borf's Bikies begin firing at Dexter.
L—To reverse direction when Dexter runs into a second group of bikies.
B—To fire at pursuing motorcycle.
D—As Dexter approaches the top of the checkered ramp, he'll begin to glow, indicating it's time to energize again. Instead, pull back on the joystick to bring him back down the ramp.
B—When Dexter pulls up beside Kimmy, the doorway behind them will light up as the final pursuing bikie rides through. Shoot him immediately.

UNDERWATER

"Now you die!" Borf says as he presses the button releasing the Black Eel.

R—Dexter and Kimberly will grab the aquafins.
B—Right after Dexter yells. (To shoot the eel.)
L—To get into oxygen bubbles.
D—To escape from the eel.
L—To escape from the eel.
D—Again, to escape from the eel.
B—To blast the eel.
B—To shoot some blue squid.
L—To grab the aquafins again.
L—When you see Dexter and Kimmy riding side by side. (This will get them safely out of the tank and onto a round platform.)
U—When the round opening in the middle lights up for the third time (yellow).

FINAL SHOWDOWN

Because this final section requires many carefully timed moves in rapid succession, it is the most difficult part of the solution. When Dexter and Kimberly arrive, they will be greeted by Borf's evil little henchmen.

B—To fire as they approach the platform.
B—To fire again (almost immediately following the first shot).
R—To avoid getting hit by the Infanto Ray blast.
L—As Dexter runs down the ramp to turn down the blue ramp on the left.
B—To energize.

CONTINUED ON PAGE 58

MINIMUM SCORE POTENTIAL: 185,000

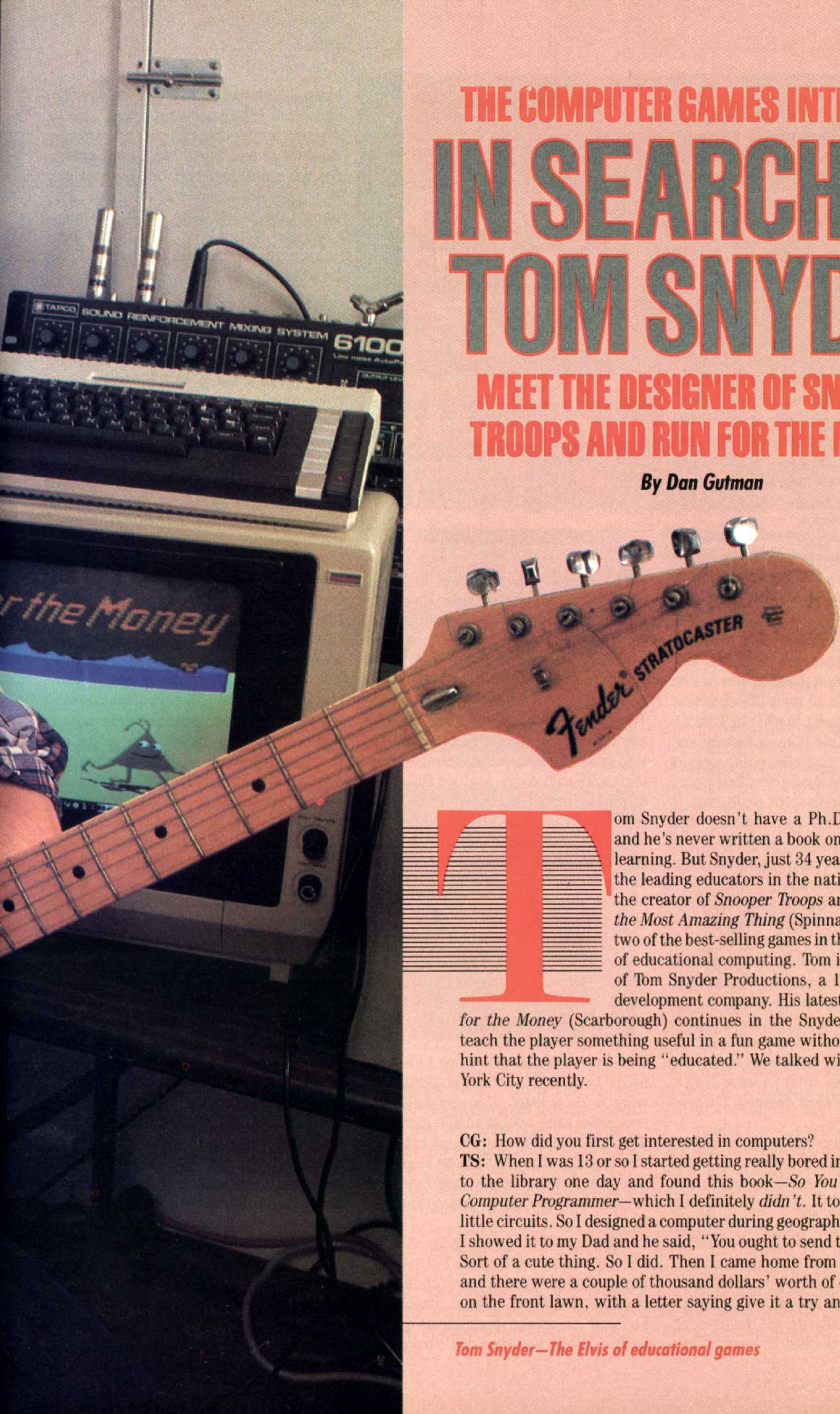
Cash 1200

THE COMPUTER GAMES INTERVIEW:

IN SEARCH OF TOM SNYDER

MEET THE DESIGNER OF SNOOPER TROOPS AND RUN FOR THE MONEY

By Dan Gutman



Tom Snyder doesn't have a Ph.D. in education and he's never written a book on his theories of learning. But Snyder, just 34 years old, is one of the leading educators in the nation today. He is the creator of *Snooper Troops* and *In Search of the Most Amazing Thing* (Spinnaker Software), two of the best-selling games in the short history of educational computing. Tom is the president of Tom Snyder Productions, a 15-person game development company. His latest creation, *Run for the Money* (Scarborough) continues in the Snyder tradition—to teach the player something useful in a fun game without the slightest hint that the player is being "educated." We talked with Tom in New York City recently.

CG: How did you first get interested in computers?

TS: When I was 13 or so I started getting really bored in school. I went to the library one day and found this book—*So You Want To Be a Computer Programmer*—which I definitely *didn't*. It told how to build little circuits. So I designed a computer during geography class one day. I showed it to my Dad and he said, "You ought to send that in to IBM." Sort of a cute thing. So I did. Then I came home from school one day and there were a couple of thousand dollars' worth of computer parts on the front lawn, with a letter saying give it a try and remember us

---

Tom Snyder—The Elvis of educational games when you grow up.

CG: Did you?

TS: No. I didn't do anything else with computers until I was a French Literature major in college. The micros had come out, and I bought a Model 1 at Radio Shack for a lark. I learned BASIC in a night and started programming. I love BASIC. I think it's a great language, but you can't sell games written with it.

CG: So you began designing games?

TS: No, I began playing rock and roll. I have been in a lot of phenomenally unsuccessful bands since high school. In 1969 I got a recording contract from Capitol Records with a band called T. Fenimore. We went to Los Angeles and recorded an album that didn't do that well. In the last couple of years I've been writing songs about kids and computers like *Doctor Micro, Flipped Out on Control* and *Run for the Money*.

CG: Based on the game?

TS: Yes. I wanted to make a business game for kids that went beyond most business games, which are sort of the lemonade stand thing—you sell four cups of lemonade and you add sugar, then the next time the computer says you sold six. I wanted to create a game in which kids were dealing with all sorts of issues that occur in the business world. In *Run for the Money*, each kid takes a factory and they have to buy raw materials, convert them into finished goods, set their price, sell them and advertise. It's really cool. It sounds complicated for children, but we've found that kids are capable of doing stock options and proxy votes, even mergers and takeovers.

CG: And is that what the song is about?

TS: Well, I didn't want to come off saying that kids ought to run for money all the time. That seemed sort of crass. The theme of both the game and the song is that the adult business world is just a game, and you might as well learn to play the game and not take it too seriously.

CG: Your games seem different than most educational games, from *Snooper Troops* to *In Search of the Most Amazing Thing* to *Run for the Money*.

TS: I don't really believe that educational software has arrived yet. A lot of people have rushed into this market and are creating junk. The reason this industry has turned out such pathetic stuff is that they use the educational expert approach—get some doctoral student who has theories on how kids should learn. Home education can't be so curricular. What has educational theory done in the schools in the last 20 years? They have successfully gotten rid of Tom Swift and Nancy Drew and replaced them with unreadable boring fiction. I'm just afraid they're going to get their hands on software and give it to the experts.

"In the last twenty years they took Tom Swift out of the schools and replaced him with unreadable boring fiction."

CG: What's your theory of educational games?

TS: I think that just about any game is educational on some level. Our approach is to take whatever information we want to teach—say states and capitals—and create an environment in which those things matter. For instance, we just finished a game called *Agent USA*, which is a killer of a game where you're running all around the country on trains trying to plant a "fuzz bomb." It's got a hundred cities in it with the real cityscapes. You're constantly running from Seattle to Denver and down to Tallahassee and up to Bangor, Maine, and you learn so much about the country without having the slightest idea you are doing it. It's like a Robert Ludlum book.

CG: I would think that when kids come home from school, the last thing they want to do is learn. I'm surprised more companies aren't doing similar games.

TS: When I did *Snooper Troops* in 1979, I was terrified that it would be ripped off from me. I rushed it out, and five years later no one else has done anything like it.

CG: What kinds of games do you like?

TS: My two favorite games in the world are *Intellivision Baseball* and *Intellivision Football*. You know a lot of times when you play an arcade game, there is that bubble around you? You don't want anyone to be around or intervene. It's really antisocial. I like games that have big open spaces where people can interact. Americans are so socialized that all our really popular sports have open spaces in them. If you go to a soccer game, you just scream the whole time. With baseball, everyone is thinking, and that's the essence of good games, I think. With *Intellivision Baseball*, you can break out a six-pack and play for three hours. The game stops, we talk and I say how did you do that, that was a good play, what kind of pitch was that? It's a social experience.

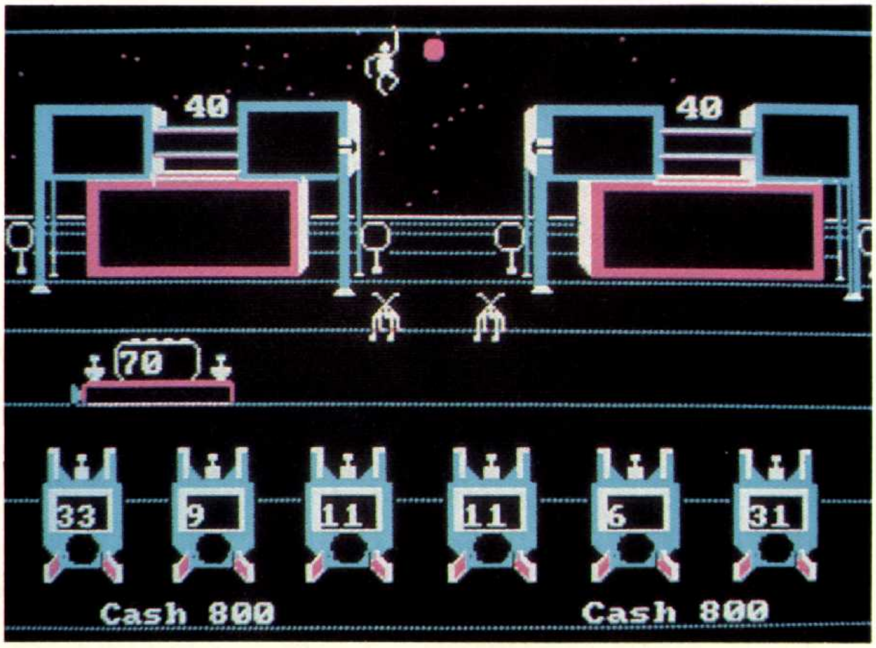
CG: And your games seem to be the same way.

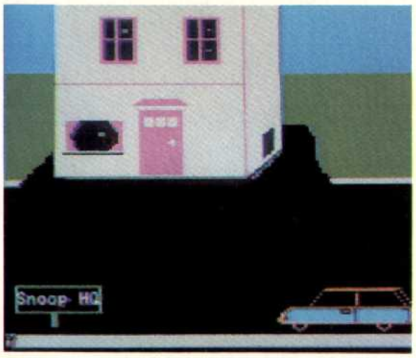
TS: Yes. What we do is make a list of all the things that we would love to hear one person say to another while they are playing the game. Like, in a business game, I want a kid to say, "I wonder why the monkeys aren't buying from me? Is my price too high?" Or something like "Boy, I just realized I'm paying 15 cents for each raw material and I'm selling it for 14 cents!" You sort of try to evoke a reaction.

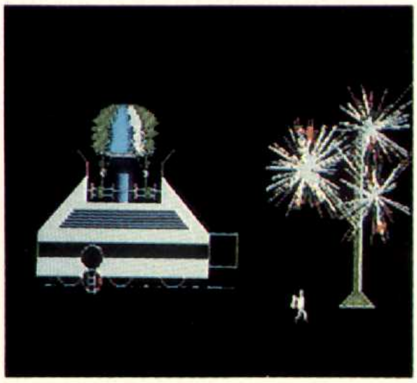
CG: Do you dislike arcade games and shooting games?

TS: No, I love those games too. I like playing them and I like watching them. But this "nuclear-issue-conflict-resolution-scene" really bothers me. A lot of companies pretend to have a piece of software that's really socially responsible —"Get your kids to try and resolve a complex political situation between America and Russia. In the event they can't, you have the following nuclear arsenal at your disposal. . . ." And then the politics part of the game lasts for a minute and the war is the rest of the game. It just seems like a dangerous idea to give the next generation of kids that are coming along—you can press a button and make a lot of damage.

Of course, I could be wrong. I wouldn't be surprised if in five years we find that these games have a fantastic therapeutic effect on kids who have no other way of acting out aggressive feelings. If they want to blow the hell out of something, it's better to do it in an arcade than in real life, so who knows? My bias goes a little bit toward I don't dig them, and I don't do them. I read one review that said a particular game was violent, but at least you are always violent against these aliens. Well, what the hell are aliens? They are Lithuanians, they are people who are different. We're working on a war game right now, simply because I want to do one right.







Tom Snyder's Run For The Money (above) will have you buying raw materials, fixing prices, selling, advertising and blasting off from the planet Simian. At left, Snooper Troops and In Search Of The Most Amazing Thing.

CG: What kinds of games do you think we'll see five years from now?

TS: With more powerful 32-bit processors coming along, there will be a real temptation on the part of designers to do very explicit physical simulations of things beyond the pinball games and flight simulators we have now. Simulators are what really got computers started, and they're going to be the name of the game. Computers are going to open up the possibilities of experiences people can have. We are doing a sailing simulation for Spinnaker that is fantastic.

In the real world you can chuck a ball up and down, and you can simulate that on a computer. But a computer can go *beyond* that simple simulation. The computer can say, "Wait a minute. What if there was no gravity? What if gravity was half? What if everything was upside-down? What if there was no atmosphere, and no friction?" Then you can build a great simulation and let the player go in and screw around with all of the parameters.

CG: Which computers do you consider to be the best game-playing machines?

TS: I'm really disappointed with the companies that are promising the world that they can deliver a computer for a very small amount of money. I have seen so many people get burned buying these machines that crap out a couple of months after you bring them home. I would like Atari to make it. That is a good machine that is well-documented and works. I can do even more on the Atari than I can do on the IBM PC.

CG: For instance?

TS: Scrolling. High-speed animation of many characters. Sound. All of our things on the IBM sound weak. Let me tell you the true piece of **** computer out on the market right now. Unbelievably disappointing. The PCjr. A designer's nightmare. I'll tell you why. If you write a short machine language program for it and a comparable one for the Commodore 64 with no scrolling or voices, the Commodore 64 is twice as fast as the PCjr. It's supposed to be for kids and families, and it's worse in graphics than anything on the market. It shows that IBM doesn't know what they are doing in a consumer market. They come to us all of the time and want to publish our games, but we say no. They have no idea about fun.

CG: It must be tempting for you to let a big company come in and bankroll your operation for you.

TS: It's very hard to do what we are doing. It costs $70,000 a month to keep our company alive. And if you're into software, people just want to put a funnel in your roof and pour money in. But it wouldn't make any sense. Software development is like sculpting granite with sandpaper. To let a big company come in and put a million bucks into us would cause us to lose that fine edge. They'd run us like a big business and it wouldn't work.

CG: You were saying the inexpensive computers were disappointing. What do you think of Apple's Macintosh as a game machine?

TS: I love it! it's fantastic. We have a play-testing center at the office, and the Macintosh just sits there and sucks kids over like flies to honey. It's so powerful. People are getting more sophisticated about their intuitions. If you draw a little square on the Mac and take a hand and move the whole thing, even a kid who knows nothing about computers is gonna say, "Holy smoke, I just moved that thing on the screen!" And the technical person will say, "Boy, that's a lot of memory to move that quickly." But everyone seems to have an instinct for things that are phenomenal. And the Macintosh is so phenomenal technically that it excites me.

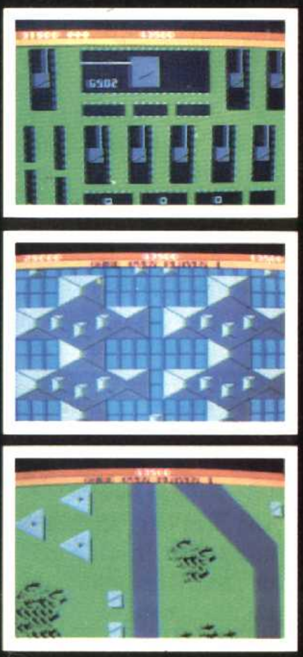
CG: What kinds of games do you dream of doing on a machine like that?

TS: I have this idea that's really esoteric. You build a tower, kind of like the tower of Babel. You have all these construction materials and you build it higher and higher. You climb up to the top, and you can see things on the horizon that you couldn't see before. You can't see this really complicated and beautiful world out there unless you build it higher and higher. And in order to build it, you have to use good building principles. Something like that would be perfect for the Mac.

FLAK

For Apple,
Atari & Commodore 64

THE ULTIMATE FLIGHT EXPERIENCE



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BY: Y. Lempereur
and A. Marsily

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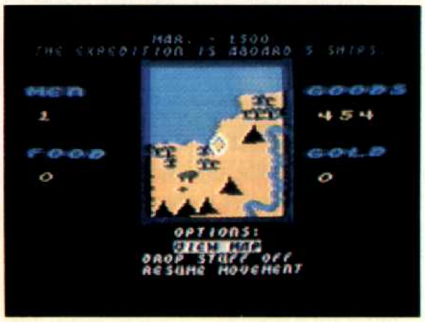
COMPUTER GAME BUYER'S GUIDE

By Shay Addams and Dan Gutman



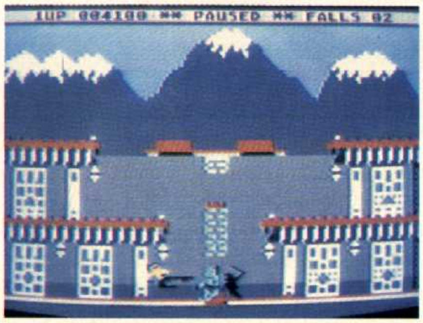
SEVEN CITIES OF GOLD

The New World is waiting to be discovered, and it's all yours to explore, plunder, discover lost cities, kill and return to Spain to the acclaim of your countrymen. Of course, it's not all fun. You can get completely lost, your men can panic or mutiny, and you can starve to death. Nobody ever said discovering America was going to be easy.

Before you set sail, stop off at the outfitters to stock up on food, provisions and your crew. This decision is important, because once you hit the New World your food supply dwindles every day and the natives get very angry if you don't have any trinkets to leave them. If you're in the mood, you can just take their gold and mow them down *Robotron*-style, but that doesn't earn you any brownie points back home and word that you are a creep travels very quickly to other villages. They will act accordingly when you visit. If you're nice to the natives, they'll help you find gold and maybe even let you have a few native bearers.

As you explore the Americas, the computer constructs maps of where you've been. (Hint: find Florida first to get your bearings.) Watching the map take shape is a kick. Once you explore both continents, you can be a *real* pioneer and use the random continent generator. The entire game is controlled by the joystick. *Seven Cities* does demand some patience, but it is engrossing and even educational once you get into it. Warning: the documentation is very slick and professional, but doesn't say much about how to play, or even load the game. And in the Atari and C-64 versions, it takes nearly a half an hour to prepare the "map disk" used to play the game.

Electronic Arts, for Atari computers. Also available for Apple, C-64, IBM.

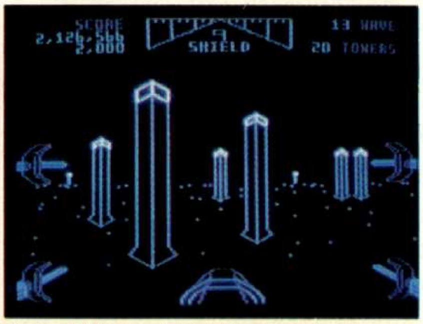


BRUCE LEE

Naturally, this one's a punch-'em-out rather than a shoot-'em-up. Your animated Bruce Lee has to find a wizard and kill him, but must first collect Japanese lanterns hanging from the ceilings in order to activate secret doors into the other rooms of the extensive fortress. Two opponents block the way—a solid black ninja, with his *bokken* stick, and the green Yamo, a sumo wrestler who can kick and karate chop with the best of them. Finish them off, and they quickly reappear at the top of the screen to interfere with your progress.

More dangers loom as you advance, including deadly electrical charges, exploding bushes and the wizard himself. You can jump and duck to avoid blows, and climb vines to reach other levels of the multi-tiered rooms. Martial arts have never been so well incorporated into a game. Animation is great, especially the flying drop-kicks that are unique to *Lee*. But the game wouldn't have received an A if not for the two-player option that pits you as Bruce against a player controlling the Yamo (while the computer moves the ninja). In combat, the flying leaps are often as funny to watch as the game is fun to play. Two players can also choose to take turns controlling Lee against the computer-controlled Yamo.

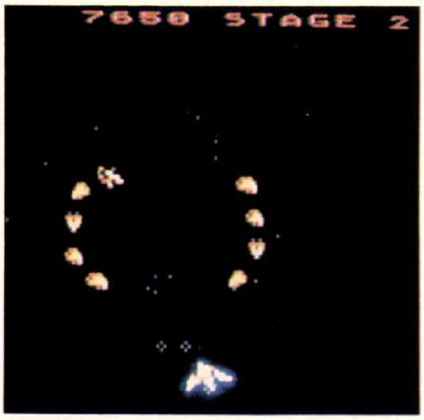
Datasoft, for Atari



STAR WARS: THE ARCADE GAME B-

This would be a good game if we hadn't fallen in love with the superior Atari arcade game. This version has the *look* of the arcade original, even without those spectacular vector graphics, but the play action just isn't there. Instead of pointing your guns where you want to shoot, you move a cursor around the screen and the shots go to that location. The guns themselves never move. Since the stars in the sky don't move in relation to the way you move the joystick, you don't get a sense that you are controlling the ship's direction at all. And for some reason, the stars are still there during the tower sequence. The trench sequence is pretty faithful to the original, and is the only real challenging part of the game. The inspiring *Star Wars* theme music has been preserved, but the "red boxes" segment has been left out as well as the voice synthesis. It is a good effort, but *Star Wars* is a game we really wanted to like more.

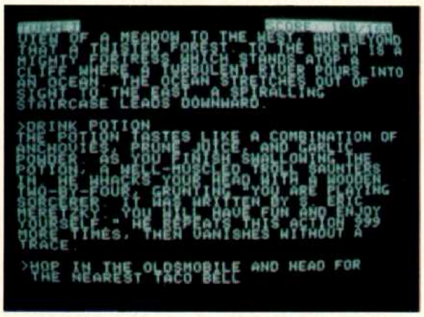
Parker, for Atari computers. Also available for 5200, VCS, ColecoVision/Adam, C-64.



GYRUSS A-

While Parker Brothers chose graphics over play action on their *Star Wars* cartridge, they put play action first in this case. It pays off. This game, which looks something like *Galaga*-in-the-round, feels a lot like the arcade original. Satellites, meteors and enemy planes swirl frantically around the screen to the tune of Bach's *Toccata and Fugue in D Minor.* You move in a wide circle around the playfield picking them off, and you can get double fire-power if you hit the middle molecule. When you reach a planet, you get a Chance Round in which you can waste an army of satellites without having to worry about them firing back. But the real goal is to reach Earth, and you've got to pass Neptune, Uranus, Saturn, Jupiter and Mars before arriving there. While the game doesn't have a lot of depth, it will appeal to all of us who never tire of shooting things. And these creeps never stop coming at you! The enemies shoot at you more than they did in the arcade game. One or two players.

Parker, for Atari computers. Also available for 5200, Adam/ColecoVision, C-64



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VIEW OF A MEADOW TO THE WEST, AND BEYOND
THAT A TWISTED FOREST. TO THE NORTH IS A
MIGHTY FORTRESS WHICH STANDS ATOP A
CLIFF WHERE A TURBULENT RIVER POURS INTO
AN OCEAN. THE OCEAN STRETCHES OUT OF
SIGHT TO THE EAST. A SPIRALLING
STAIRCASE LEADS DOWNWARD.

>DRINK POTION
THE POTION TASTES LIKE A COMBINATION OF
ANCHOVIES, PRUNE JUICE, AND GARLIC
POWDER. AS YOU FINISH SWALLOWING THE
POTION, A WELL-MUSCLED TROLL SAUNTERS
IN. HE WHACKS YOUR HEAD WITH A WOODEN
TWO-BY-FOUR, GRUNTING "YOU ARE PLAYING
SORCERER. IT WAS WRITTEN BY S. ERIC
MERETZKY. YOU WILL HAVE FUN AND ENJOY
YOURSELF." HE REPEATS THIS ACTION 999
MORE TIMES, THEN VANISHES WITHOUT A
TRACE.

>HOP IN THE OLDSMOBILE AND HEAD FOR
THE NEAREST TACO BELL
```

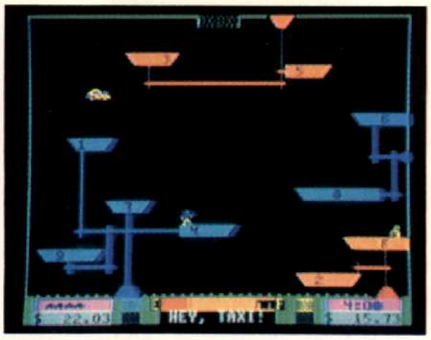
SORCERER A+

Belboz, leader of the Enchanters' Guild, has vanished. He's evidently under the spell of an evil demon, Jeearr, and it's up to you and your Spell Book to rescue him. Exploring the Guild Hall turns up a few scrolls with more spells, and a copy of the Encyclopedia Frobizzica sheds new light on the mythology of the Great Underground Empire, its curious history, oddball kings and other characters. The first real problem involves leaving the Hall to look for Belboz—a "warning nymph" refuses to let you exit through the only door.

Outside, a world of weirdness awaits beyond the Twisted Forest. The terrain is a combination of above-ground and subterranean locations, including snake-filled pits, caves, a castle, an amusement park and Fort Griffspotter. Magic remains the key to solving most puzzles, as in *Enchanter*, but some new spells come in handy: "izyuk" allows you to fly, and "meef" will turn a Caesar salad into dust. The former is essential when you reach the Glass Maze, whose clear walls, ceilings and floors can lead to sudden death if you stride boldly into a room that has no floor. Magic potions are handy in other tight spots.

It's a vast world, full of puzzles that are more difficult than those in *Planetfall* and *Enchanter*—but nowhere as tough as *Zork* or *Infidel.* The new 1,000-word vocabulary, made possible by breakthroughs in programming techniques, will serve you well. Meretzky's inimitable sense of humor romps throughout the story, and his flair for conjuring up a convincing alternative universe is unparalleled.

Infocom, for most computers



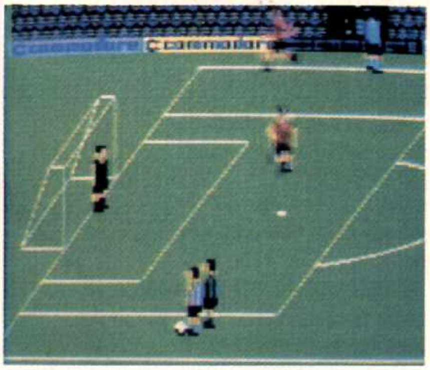
SPACE TAXI A

Some games give you free reign to recklessly roam the screen, bouncing off the walls if you like. Others demand slow, intense precision to stick to a safe path. *Space Taxi* is the latter. You've got to maneuver your taxi with short horizontal and vertical thrusts to pick up passengers and deliver them to landing pads across the playfield. You have no enemies and you don't shoot anything, but magnets, shooting stars, narrow passages and black holes make the driving very difficult. Your score is registered by the money you earn in fares and tips.

If that were all, *Space Taxi* would still be an excellent game. But it's also a breakthrough game—the first Commodore 64 game with clearly intelligible voice synthesis right on the disk. Passengers shout "Hey Taxi!," "Pad 5 please" and other phrases when you pick them up or drop them off. While the voices are not necessary (the words are also written on the screen), they add a nice touch. There are few other sounds in the game. The graphics are better than average.

This is not a game for the hyperactive. You've got to be extremely cool, exacting and patient. There are 24 completely different screens to get through. The first is ridiculously easy, but you'll be sweating by screen six. Recommended for experts *and* beginners.

Muse, for C-64



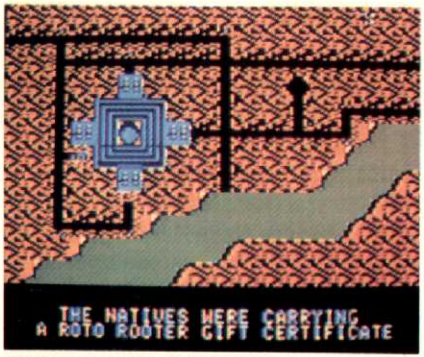
INTERNATIONAL SOCCER B

After noting that *International Soccer* is a state of the art sports simulation with realistically animated players and outstanding graphics, let us quickly add that the state of the art for computer sports games is still in the Mesozoic Period. While recent games like Gamestar's *Star League Baseball* and Electronic Arts' *One-on-One* are spectacular, they still don't come close to duplicating real-life games.

For example, here are some of the built-in limitations of *International Soccer:* you can only control one of your six players at a time—the one closest to the ball. When you kick the ball, it always travels the same distance, and only goes in the direction you're facing. Players can run through other players as if they were ghosts. You can't control where your goalie dives, only *when*.

Nevertheless, *International Soccer* is fun to play, especially against a human opponent. The game deserves a good grade because it's the best we have—right now.

Commodore, for C-64



THE NATIVES WERE CARRYING A ROTO ROOTER GIFT CERTIFICATE

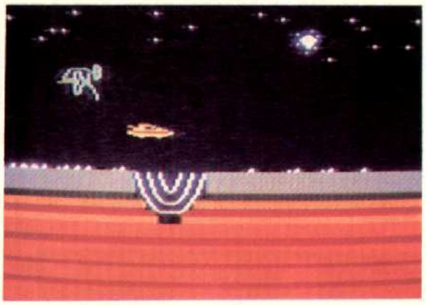
EXPEDITION AMAZON A+

Instead of sending orcs and dragons to kill you as most role-playing games do, this one dispatches tribes of Amazon warriors, swarms of diseased mosquitoes and other real-life menaces as you search for the Inca's Lost City of Ka in the Peruvian jungle. The character generator assigns hit and endurance points for up to four team members: a Medic, Field Assistant, Guard and Radio Operator. Then you visit the menu-driven trading post in Iquitos, Peru, for food, grenades and other gear. A quick trip to your base camp in the jungle follows, where your team is represented by four white dots on a blank screen. As you press keys to move them, the area they've just entered appears; different colors distinguish jungle, Incan ruins and the murky Amazon. When natives attack, each member can act individually; combat results and other messages are flashed at the bottom of the screen. (You never see the enemy, however.) Silver and gold relics you stumble across can be sold back in Iquitos, enabling you to buy more supplies.

Mapping each sector (screenful) of the jungle and subterranean mazes is mandatory, or you'll soon be hopelessly lost. If the whole team is wiped out, the expedition is cancelled and you must form another. But a session can be saved to the game disk and restarted from that point if you later remove the disk before your last man dies. Two teams can be saved on disk, so a pair of players can compete (though both can't play simultaneously).

The final maze scene features animated action. There's also a rich vein of humor here: instead of gold artifacts, you often find "an empty Perrier bottle."

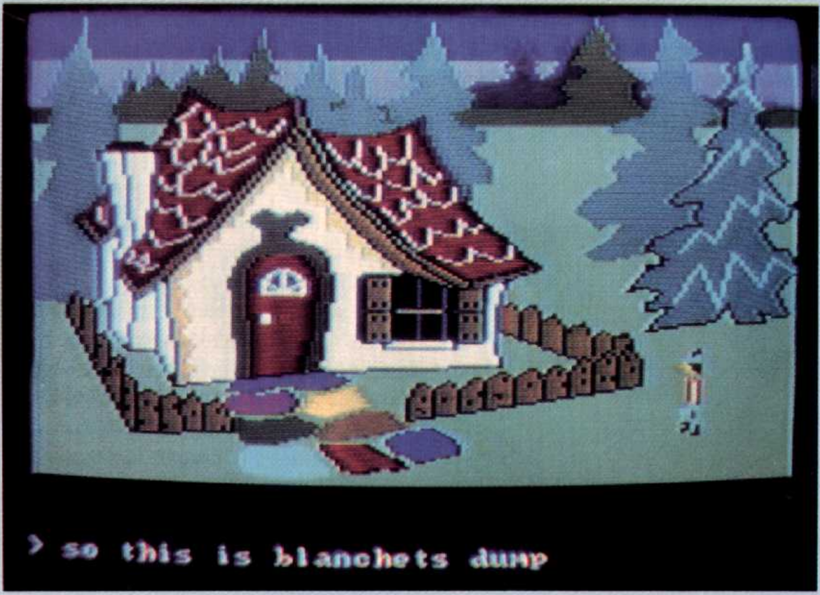
Penguin, for Apple



JAMES BOND A

Your vehicle's a James Bond special: it can fly straight up in the air, dive below the water, and packs lasers for knocking out airborne targets and flare bombs for underwater foes. Scenes from Bond films form the basis of the four missions, all staged on horizontally scrolling screens. In *Diamonds Are Forever*, you bounce across a crater-pocked desert, avoiding bombs from indestructible satellites and blasting away at big diamonds in the sky. Success leads to an ocean scene, where these enemies are abetted by frogmen firing from below. The goal is to land on

COMPUTER GAME OF THE MONTH



> so this is blanchets dump

KING'S QUEST A+

If you're weary of walking through graphic adventures by typing "go north," this revolutionary breakthrough should be at the top of your software shopping list. It's the first fully animated adventure: you control, via joystick or cursor keys, the movement of Sir Grahame as he treks through the land of Daventry in search of a magic mirror, a chest full of gold and a magic shield. The animation's excellent. His legs and knees bend, his arms swing and he can also jump, duck or swim if you hit the right key or fire button.

Standard adventure game commands like "look at rock" are entered from the keyboard. There are plenty of intriguing puzzles to solve before Sir Grahame can fulfill his quest and inherit the throne from King Edward. A variety of menacing creatures—wolves, trolls, ogres—and a witch and evil sorcerer will make pie crust out of Sir Grahame if you don't move fast enough. All of Daventry's inhabitants are equally well-animated.

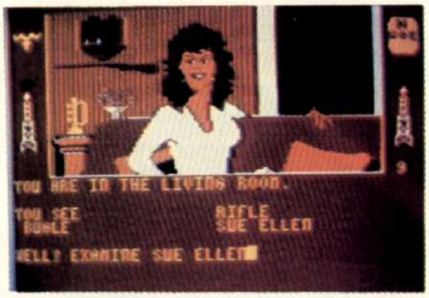
The scenery is illustrated with fine detail and lush colors, and Sir Grahame can walk behind or in front of some of the trees, rocks, houses and other objects. This lends a sense of depth that borders on the three-dimensional. Sound effects accompany many scenes. The only problem is that occasionally your character gets stuck if he gets too close to a rock or other picture element and can't get loose—so that's it for that session. Fortunately, the game can be saved in progress. Even with this slight quirk, *King's Quest* represents a remarkable achievement. It's like playing an animated cartoon, but requires more than the eye-hand coordination of an arcade game like *Space Ace*. In fact, this game does more than just point the way for graphic adventures of the future—it opens up a whole new sub-genre.

Sierra, for PCjr

a floating oil rig that's visible only by the light of the exploding diamonds, so sharp timing and reflexes are vital. The rest of the missions, from *Moonraker* to *For Your Eyes Only*, also take place at sea, against everything from space shuttles to mini-subs and helicopters.

The different missions and variety of enemy weapons make *Bond* an exceptionally challenging shoot-'em-up. It's also interesting to have a definite purpose at the end of each mission, instead of simply shooting everything that moves. Graphics and sound are simple, but the action's intense all the way. No bonus ships are granted, but you don't have to start over from the first screen when you get wasted. A high-score display would have been nice. Two skill levels. Two-player option.

Parker Brothers, for Adam, Atari, C-64



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YOU ARE IN THE LIVING ROOM.

YOU SEE              RIFLE
 BOWLE               SUE ELLEN

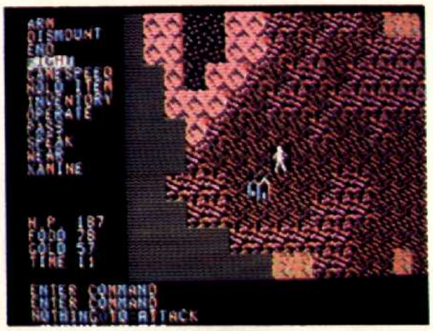
WELL? EXAMINE SUE ELLEN█
```

DALLAS QUEST A

Gorgeous artwork makes this one of the best-looking graphic adventure games ever. The plot's not half-bad, either. You're working for Sue Ellen to find a map showing the location of some oil fields Jock discovered on his last and fateful trip to South America. There's a one million dollar reward, so you shrug off the fact that J.R. is out to do you in and grab the map for himself. *Dallas* fans may be disappointed to learn that little of the game revolves around the Texas locale after you manage to escape the thugs J.R. hired to keep you from leaving Southfork.

The action quickly hops to a South American jungle, oddly populated by elephants, lions and other animals that show up to help or hinder your progress. J.R. makes an occasional appearance, too. The jungle scenes are vividly painted, and you'll find some well-constructed problems throughout the game. The two-word parser is not as unwieldy as most, thanks to a large vocabulary. You can make it easy on yourself by asking the program for a clue. It will furnish nine in each game, though only one per problem. Sound effects complement many scenes, and the C-64's sprite capability is excellently employed to produce dramatic 3-D effects and interesting spot animation. Eight games in progress can be saved to the game disk.

Datasoft, for Commodore 64



```
ARM
DISMOUNT
END
[illegible]
GAMESPEED
HOLD ITEM
INVENTORY
OPERATE
PASS
SPEAK
WEAR
XAMINE

H.P.  187
FOOD  28
GOLD  57
TIME  11

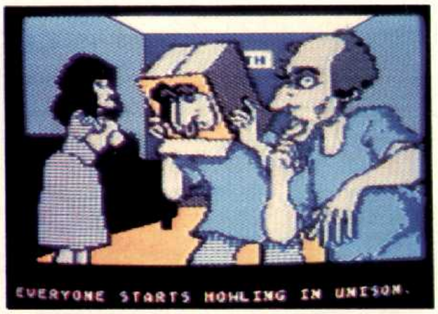
ENTER COMMAND
ENTER COMMAND
NOTHING TO ATTACK
```

QUESTRON C-

Formula for a knock-off: take a smash hit (*Ultima II*), get rid of one element (the time doors), and alter the user-interface (with an option for joystick-controlled action). *Questron*'s scenario—defeat an evil magician—is identical to *Ultima*'s, and the play mechanics are too familiar to be a coincidence (you move about a similar horizontally scrolling screen that depicts the landscape). Towns, castles and dungeons, some with 3-D graphics, can be visited to stock up on weapons, food and other essentials, or to seek treasure or clues. (These are portrayed like their counterparts in *Ultima I*.) The blackjack and roulette tables in some towns provide an interesting means of increasing your gold stash, and may prove more fun than exploring the rest of this fantasy role-playing game (incorrectly described on the packaging as an adventure).

It's a two-disk game, but can be played with a single drive. That means lots of places to explore. The 60 kinds of monsters include everything from Fire Beetles and Flesh Renders to Manglers and plain old bears. Effects of your weapons and their blows are flashed onscreen during combat, but there's no genuine animation. The joystick option is a relief from the burden of typing in commands, and your menu of 17 alternative actions is always visible, so you don't have to keep looking down at a reference card. Games in progress can be saved. If you enjoyed the *Ultima* series and can't wait for the next sequel, *Questron* will keep you fairly entertained for some time. If you detest obvious knock-offs, keep your distance.

Stragic Simulations, for Apple



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EVERYONE STARTS HOWLING IN UNISON.
```

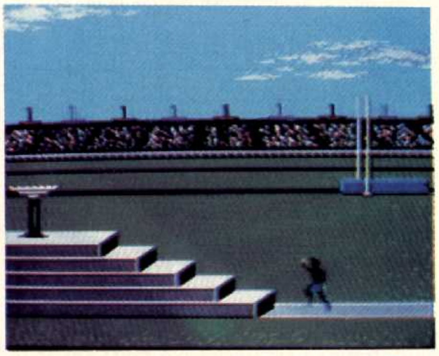
THE INSTITUTE B

In this graphic adventure, you wake up inside a nuthouse. (Apparently, that last Infocom game drove you completely over the edge.) The goal is to escape the Institute. Normal methods don't apply here: you won't find a hidden key or magic word that opens the front door. The counselor is no help, either, insisting that you must be locked up for your own sake and to protect society. Like all shrinks, he blames your "insanity" on something that happened in your childhood. You might pick up clues from the roomful of howling lunatics, however.

The graphics, prepared with Penguin Software's *Complete Graphics System*, are humorous and good-looking. You can switch them off to speed up the game. When you type in a command, the picture vanishes and is replaced with a text screen indicating the name of the current location, visible objects, inventory and the command as it's being typed in. Hit return and the results of your command fill the screen with the appropriate new picture.

Up to seven games can be saved to the game disk, and a list of coded clues is included. If you're tired of adventures set in "days of yore" and outer space, *The Institute* offers a refreshing change of scenario.

Screenplay, for Apple, Atari and Commodore 64



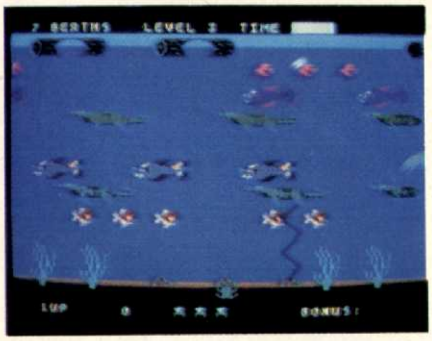
SUMMER GAMES B+

Simulate the real Olympics at home! Compete in the Pole Vault, Diving, 400-

Meter Relay, 100-Meter Dash, Gymnastics, Skeet Shooting, Freestyle Swimming Relay and 100-Meter Freestyle. Unlike similar games such as Activision's *Decathlon* and the arcade game *Track and Field*, *Summer Games* requires more mental work than physical exertion. You only have to jiggle the joystick back and forth like a maniac for the 100-Meter Dash. All the other events demand subtle timing and joystick movement. In the Diving competition, for instance, your diver takes a 30-foot leap and you control body position and rotation speed in an effort to hit the water vertically. The 400-Meter Relay is a delicate intellectual challenge, while Skeet Shooting is a very good eye/hand contest.

Summer Games attempts to duplicate the real Olympics, right down to the opening ceremonies (a runner lights the torch and doves fly away). You can represent any of 17 nations, and all their flags and national anthems are in the program. Up to eight players can compete, with points accumulated throughout the Games. After each event and at the end, the winner's flag is displayed and national anthem played. The graphics are colorful and detailed, amazing considering how much was packed in this program.

Epyx, for C-64

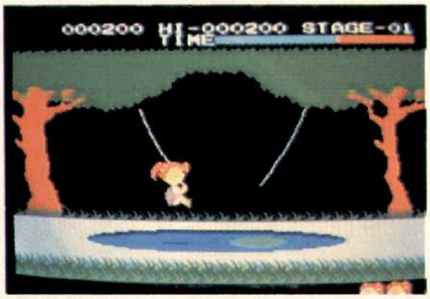


FROGGER II A

Get ready for another adventure with that tantalizing toad, *Frogger* fans! *Frogger II* continues the journey with a three-screen adventure that makes the original look like kid stuff. There is so much complexity here it would be impossible to describe all the game's nuances. Screen I takes Froggy underwater. As in the original, he avoids obstacles in an attempt to reach his home. But now there are bubbles worth bonus points and Joe, the diving turtle, who will give Frogger a ride for free. Screen II brings your frog to the surface. Here, a mama duck will give Frogger a ride to the next screen if he's nice to her offspring. Finally, Screen III takes Frogger up to the wild blue yonder. This screen is the most interesting and varied of the three. Here Frogger can eat butterflies and float on clouds.

Frogger II features outstanding cartoony graphics and a catchy theme song. Gone is the continuous musical score, but it's hardly missed. Parker is also releasing an edition for the VCS, but without the outstanding graphics the enchantment of the game is lost.

Parker Brothers, for Atari computers

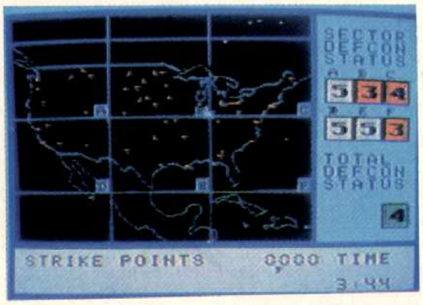


CABBAGE PATCH KIDS B+

Since Coleco owns the rights to the Cabbage Patch dolls, it was only a matter of time until they were featured in a computer game. The plot here is simple. Anna Lee, one of the kids, is taking a stroll through the park. But with every step there's another obstacle..

Cabbage Patch Kids shares much in common with Coleco's *Smurf* game. The target audience is again young children (primarily girls) and the action is slow-paced. But Coleco has learned from their mistakes. Unlike the *Smurf* game, this contest features more than 50 screens. The designers have also added a little more challenge. You'll find yourself swinging on vines, bouncing on trampolines and jumping over everything from fountains to campfires.

Coleco, for Adam/ColecoVision

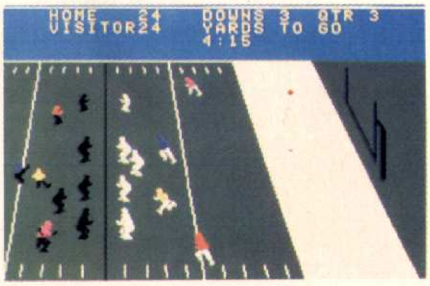


WAR GAMES A

The fate of the free world is in your hands. As time ticks away, you use your defenses (subs, interceptor jets, ABM's, satellites) to protect the United States. By pressing one of six keypad buttons, you get a closeup view of a section of the U.S. Next, select an appropriate defense, fire, and rush to another vulnerable location.

The action is nonstop. But don't expect to pick up your joystick and immediately save the world. This game takes hours of practice. You utilize ten buttons, two fire buttons and the control stick. You'll find yourself constantly pressing buttons and twisting the control stick as you jump around the nation. As a result of this complexity, we only recommend *War Games* for people who are 12 or older. The graphics and sound effects are terrific, but the play action is the real star.

Coleco, for Adam/ColecoVision



SUPER ACTION FOOTBALL A-

Sports fans will not be disappointed. In an attempt to capture as much realism as possible, the designers have taken the Super Action Controller and utilized every button and knob to give you exceptional control. On offense, you go to the huddle and set a blocking pattern for your linemen. Next, determine your receivers' pass patterns and the direction, speed and distance of your flanker's run. Once your plays have been set, your men will run them automatically. Your quarterback, halfback and fullback are controlled by the four color-coded action buttons. You can increase their running speed by spinning the speed roller. On defense, you can blitz left or right. If all of this is a bit much for you, skip the decision-making and the computer will set up a play. The cartridge comes with a play book.

The graphics are very good and they feature a scoreboard that flashes messages. The sound effects are better than *Super Action Baseball*. It's the extra touches that make *Super Action Football* such a winner.

Coleco, for Adam/ColecoVision

SCHOOL'S OUT!

THE LATEST IN EDUCATIONAL GAMING

BART THE PROGRAMMABLE BEE

By Dr. Raymond Dimetrosky

Bumblebee teaches "the basic principles of programming." The object is to fly Bart the bee from flower to flower in an attempt to collect pollen. Once you've achieved your goal, you speed on back to your hive to collect bonus points for fast performance. There are the usual computer menaces: Phineas the frog would like to eat you, and Olga the spider would just love to catch you in her web. Since there are ten levels of play, *Bumblebee* can offer varying degrees of challenge. So where does the education come in? Well, that depends on which game you choose. You see, there are actually two different contests in *Bumblebee*. The "joystick game" is not the least bit educational, nor is it meant to be. You simply gather the pollen by using your joystick to fly the bee around. This version of *Bumblebee* is hardly thrilling, and with the exception of young children, the gamer may quickly become bored. The "programmed game" is another story entirely. Here you must use the keyboard to type in instructions and then you command him to carry them out. You are instructed in the manual on how to use the three major commands. With the direction command you determine whether your bee travels north, south, east or west, and how far in each direction. The "if safe" command allows you to protect Bart. Now Bart will only move in a direction if he is guaranteed not to run into a natural enemy. Finally, the loop command allows Bart to repeat his maneuvers.

The instruction manual is very important in *Bumblebee* because it teaches the commands that are necessary to run the program. Fortunately, it is clearly and concisely written. The screen is attractive, featuring good colorful graphics on the left side, and a white area showing the commands on the right side.

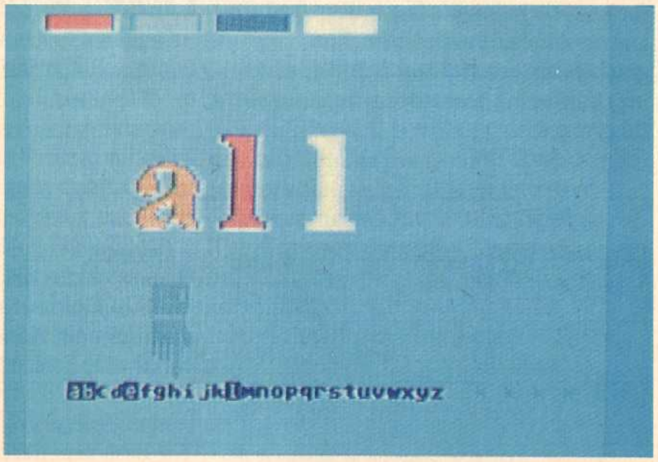
Creative Software, for Commodore 64
Educational Value: B
Entertainment Value: C+

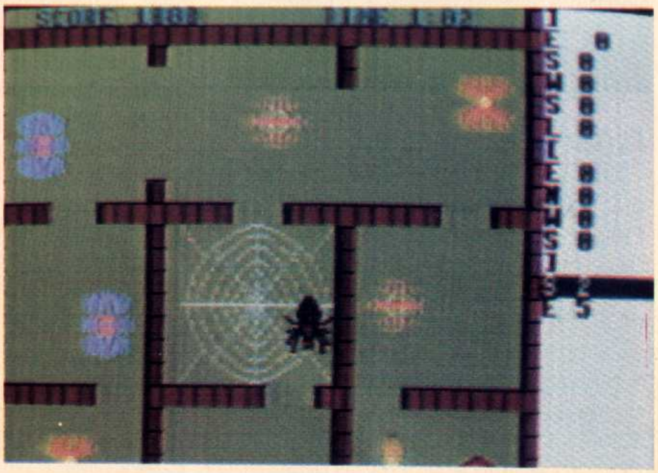
Webster: The Word Game

The instruction manual for *Webster* describes the program as providing "excitement, fun and learning." They've hit the mark with the word fun, but the excitement and learning never really happen. An incomplete word appears at the top of your screen while the alphabet sits on the bottom. Your job is to move a hand across the alphabet in order to select the letters that complete the word. While you're doing this, the word gradually falls down the screen. If it hits bottom before you've completed it, you're out of luck. It's fun to play the game, but it never quite reaches its objectives.

Webster supposedly teaches spelling, vocabulary development and recognition of patterns in the language. It is hard to imagine how the child is developing his or her vocabulary since there are never any definitions of the words! Learning vocabulary is not simply recognizing a word, but also determining what it means. The program comes closer to succeeding in teaching spelling. The trouble is that some of the words fall so quickly that you barely have time to decide which letters are missing and search for them. Instead, you'll probably find yourself frantically moving up and down the alphabet hitting letter after letter. Your eye-hand coordination is really the important factor here, not your spelling ability. It might have been a better idea to include a variation that allows you limited guesses. This version would not have been as much fun, but it would have changed the emphasis from speed to spelling. To *Webster*'s credit, it probably *does* help the child to recognize the patterns of our language. There are over 700 different words to choose from at seven skill levels, therefore many family members can be challenged. You can also play with joystick or keyboard.

CBS Software, for Apple, IBM PC, PCjr, Commodore 64, and Atari computers
Educational Value: C-
Entertainment Value: B





In Bumblebee, you fly Bart the bee from flower to flower in an attempt to collect pollen and teach you simple programming. Webster: The Word Game works on vocabulary skills.

Meet your kid's new teachers.

At first glance, they look like funny creatures right out of a computer game shoot 'em up. But underneath the funny surface, they represent one of the most serious approaches to home education you've ever heard of.

INTRODUCING SPROUT™ SOFTWARE.
GAMES THAT TEACH.

These amazing teachers are called Tink and Tonk. They come from Sprout. Software for kids 4 to 8.

The beauty of Sprout is how we balance entertainment with a healthy dose of education.

While kids are having fun at home, they're reinforcing what they've learned at school. Things like the alphabet, spelling, vocabulary, counting, adding, and pattern recognition.

You'll also like how Sprout prevents boredom. Our games grow up, instead of wear out. As kids get older, the game gets harder—with many variations and many decisions to make.

Sprout didn't learn how to do all this overnight. You see, we've got a hundred years of experience to lean on. (Our parent company is SFN, the country's #1 textbook publisher for elementary and high schools.)

We've also got the experience of Mercer Mayer, who has written or illustrated 80 children's books. He dazzles kids with ideas and pictures that keep them coming back for more.

So let TINK!TONK!™ software teach your kids. And when they play at the computer, they won't be playing around. They'll be learning something.

TINK!TONK!
Tuk Goes to Town

Compatible with Atari,® Commodore,® Apple,® and IBM.®

sprout

Games that grow up.
Instead of wear out.

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32 GAMES FOR

Alice: A unique chess-type game with Alice in Wonderland as your piece, and the rest of that crew chasing you all over the board. Special "design your own expressions on the enemys' faces" feature. (Apple)

B.C.'s Quest for Tires: Arcade action at its best as you control B.C. in his effort to save his girlfriend from a fate worse than having to watch that boring Michael Jackson video on MTV over and over and over.... (Sierra)

Deadline: If you haven't heard of this one, you *must* be dead. It's an all-text adventure in which you play the role of detective to solve a murder. (Infocom)

Enchanter: The first of a trilogy that's like a magical version of *Zork*. Explore an evil magician's castle, learn to use your spells and rid the land of black magic. All-text, all-fun. (Infocom)

Enigma: When will this all-text science fiction adventure game ever be released for *any* computer? That's the only enigma. (Synapse)

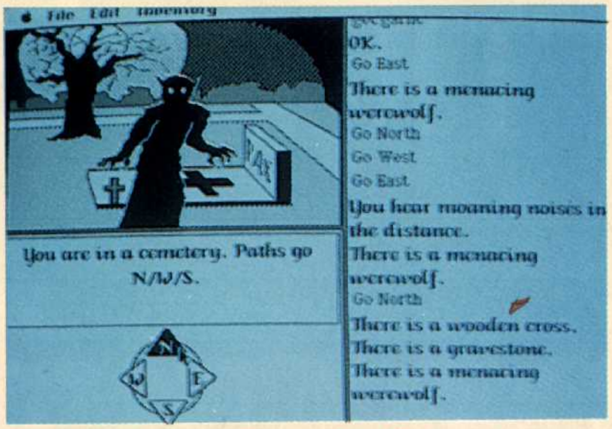
Exodus: Ultima III: If you want to find out how engaging a fantasy role-playing game can be, step into the world of Sosaria. Create four-member parties of wizards and warriors, then track down the evil Exodus. Set aside a few months, maybe a year, for this one, because there are lots of puzzles to solve along the way. (Origin Systems)

Frogger: The classic arcade game. Also the first conversion done using the original specifications from Sega. Mouse and keyboard control. (Sierra)

Infidel: An all-text adventure, *Infidel* drops you off in the desert to find and explore a mysterious pyramid of a lost Queen of the Nile. (Infocom)

Lode Runner: Fast action and strategy as you dig holes and climb ladders while running through a maze to round up the gold. Create your own mazes with a special option, then put the enemy and treasure wherever you want. (Broderbund)

Master Type: The all-time best typing game, if you're not a fan of the Wizard of Id. Type the word correctly or get blasted by aliens. (Scarborough)



```
You are in a cemetery. Paths go
N/W/S.
```

```
OK.
Go East
There is a menacing
werewolf.
Go North
Go West
Go East
You hear moaning noises in
the distance.
There is a menacing
werewolf.
Go North
There is a wooden cross.
There is a gravestone.
There is a menacing
werewolf.
```

Transylvania *shows off many of the Mac's exotic features, like the mouse-activated compass rose, a real time-saver, and pull-down menus for checking inventory and saving a game in progress.*

Millionaire: Play the stock market and make a million But you won't win in a single session of this superb simulation. Based on actual stock market trends rather than randomly generated numbers, it's as enlightening as it is fun. (Blue Chip)

Murder by the Dozen: A multi-player murder mystery game in which you compete to see who can solve the crime first. For those who find *Deadline* and adventure games too hard. (CBS Software)

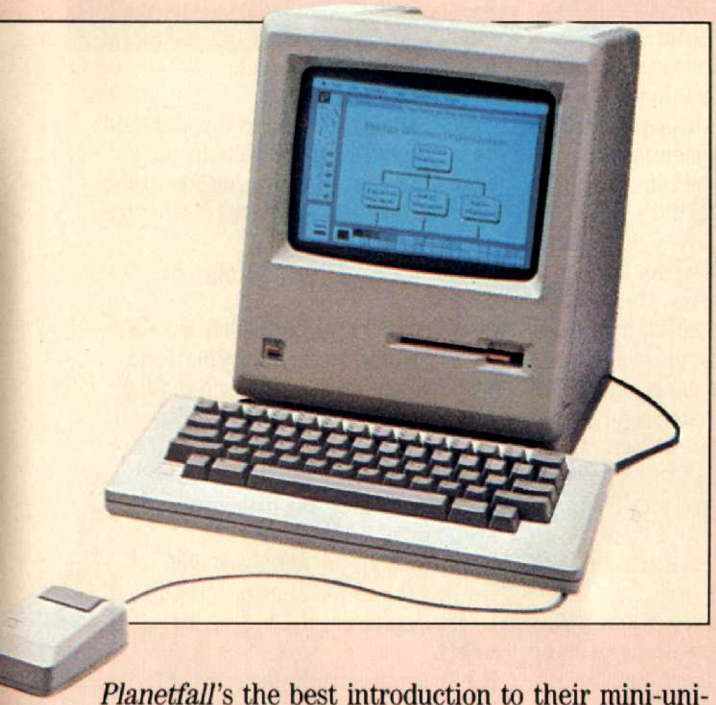
Music Construction Set: One of the best music programs, this one lets you mouse notes around in standard musical notation and use the Mac's Cut and Paste features, icons and other options as you write your own songs in four-part harmony. (Electronic Arts)

Pensate: A strategy board game that is truly original. For thinkers only. (Penguin)

Pinball Construction Set: Play the four games that are provided, then design and build your own, dragging flippers, spinners and other parts from the tool box onto a blank pinball machine. No tilt though. (Electronic Arts)

Planetfall: A laugh-a-minute robot named Floyd follows you everywhere in this all-text sci-fi adventure. If you've never played an Infocom game,

MACINTOSH



Planetfall's the best introduction to their mini-universes—challenging and fun, but not as difficult as the others. (Infocom)

Project Space Station: Like *Pinball Construction,* but permits you to build your own space station from spare parts, then blast off and put it in orbit around the earth. (HesWare)

Run for the Money: A fun business simulation set on another planet. Race against the computer or another player to amass a fortune. Based on real economic theory, so you might even learn something. (Scarborough)

Sargon III: Simply the best chess game available. Built-in chess problems and over 100 classic games of the masters for learning purposes. Also lets you play another person, save games to disk. (Hayden)

Seastalker: An all-text adventure designed for 8–13 year-olds, *Seastalker* puts you in charge of a mini-sub and challenges you to rescue an underwater research lab from denizens of the deep. (Infocom)

Starcross: Explore an alien spaceship that's full of strange life forms from around the universe, then repair the ship before they—and you—die. (Infocom)

Suspended: The only all-text adventure in which you control the actions of a band of robots, manipulating them to put your underground cryogenic bunker back together before it's too late. (Infocom)

The Coveted Mirror: Charming graphic adventure in which you must collect the missing piece of a magic mirror to break the evil rule of King Voar. Not too difficult and lots of fun. (Penguin)

The Quest: Sprawling graphic adventure with too many different scenes to count. Your mission? Stop that dragon!! (Penguin)

Transylvania: Graphic adventure with excellent puzzles and clever plot. Been kicking around for years, but still one of the best. Mouse and other features are supported, but no Cut and Paste. (Penguin)

Ultima II: A role-playing game that resembles the film *Time Bandits* in some respects. You control a single character who must fight orcs, wizards and other fiends before finally tracking down Minax, the ultimate menace. (Sierra)

Witness: Set in 1938 Los Angeles, this Raymond Chandleresque mystery defies you to solve a murder that takes place while you're talking to the victim. All-text, and not as difficult as *Deadline.* (Infocom)

Wizardry: One of the original epic role-playing games, this one is being rewritten top to bottom to take advantage of every unique feature of the Mac. Look for it in 1985, or maybe by Christmas. (Sir-Tech)

Wiz Type: An educational game featuring Johnny Hart's lively character from the Wizard of Id comic strip. (Sierra)

Xyphus: This fantasy role-playing game differs from most in that it consists of six progressively tougher scenarios instead of a single overall plot. Each last 3–12 hours and casts you in the role of Fighter or Spellcaster in the enchanted land of Arroya.

Zork I, II, III: The classic all-text adventure game, this trilogy is set in the subterranean world of Zork, inhabited by trolls, magicians and other fantastic creatures who make life tough as you attempt to collect various treasures. (Infocom)

LUCAS

CONTINUED FROM PAGE 19

things he wanted to see in *Ballblazer* was two different vehicles (on the grid at once)—like Monopoly pieces. You know, I'm the shoe, you're the dog," he laughs. "Well, that didn't happen. My opinion was: This is a sport and the two contestants should have evenly matched equipment so that the ship itself doesn't make a difference. When the time came to show him the game with two similar ships, he said: 'So both ships are the same.' And I said: 'Yes, both ships are the same.' It stopped at that. I just assumed if he had a serious objection, he would have voiced it at the time."

What's next for this group (which also includes the former director of AtariSoft, Steve Arnold; an ex-Atari animator, Gary Winnick; and the team leader for Williams' coin-op *Sinistar*, Noah Falstein)? Peter Langston outlines three areas of interest:

"We're going to do some more things with home games; there are a lot more interesting possibilities there. We're thinking about what we might do with an arcade game. We're also thinking about some longer-range goals—things that are perhaps more environmental, things that add to the social interaction aspect of games, things that have some kind of lasting value in areas other than entertainment."

You mean no *Star Wars* games, I ask incredulously. "I don't think we could afford the licensing fees... seriously. It's not that we'd have to pay them, it's just that they [Lucasfilm licensing] couldn't charge them to someone else.

"Let's take an easy example," Langston continues. "If we put out Indiana Jones games, then our licensing department can't sell the exclusive rights to, say, Sega. Even so, our feeling from the beginning was: Why not create our own characters and not piggyback on George's stuff?"

"*Fractulus* feels a lot like the *Star Wars* movies," Dave Levine says. "But you don't need the same characters to give that same kind of feeling, especially when you have the Lucasfilm name on the game."

Could *Rescue from Fractalus* become the first movie based on a computer game? Levine smiles. "You want to finance it?"

PRESIDENT

CONTINUED FROM PAGE 30

campaign period, when the winner of that state is determined. The flag is made up of little people—constituents—whom you try to collect while avoiding collisions with issues (represented by numbers) with which you disagree.

Finally, the election takes place, tallying up the electoral votes each player won during the state campaign periods. A bit of reality slips into the game here as different states deliver different numbers of delegates in proportion, in fact, to the number they would deliver in reality. The game is cute, but lacks the sophistication of the games previously mentioned.

There are bound to be some who find U.S. national politics child's play. So, what *does* one do after becoming President? Computers have an answer to this one, too: take on the world. *Geopolitique 1990* (Apple II line) pits one player as the U.S. against the computer as the U.S.S.R. This is a game that could only be fun on a computer (which will untiringly keep track of more factors than most humans can or want to). The game uses seven scenarios, ranging from the current political situation to one which finds the two superpowers on the brink of war.

As the game begins, each power sets its goal priorities, choosing among economic, political and national security objectives. The first power to attain these goals wins, unless one country declares war, in which case the one who wins the war (a second part of the game with its own set of rules) wins the game. Each year has several phases, including strategic, economic, political, military and negiotiation phases. The player must worry about allocating the U.S. industrial capacity to raw materials and secondary goods, maintaining the military, the level of world tension, the likelihood of the U.S.S.R. declaring war and negotiating with minor countries to gain more power and influence.

This is not an easy game to play, nor is it quick—it can take hours and hours to complete. One thing it is: humbling. Anyone who thinks running for President is easy should have a go at this one. There are so many factors to consider, you find yourself wishing *you* were a computer.

With all this software out covering every angle of the political process—and more sure to emerge before the year's end —the computer is showing its colors as the political machine it really is.

BEAT IT

CONTINUED FROM PAGE 43

B—To hit Borf with the cudgel.

R—To avoid getting hit back.

B—To take another swing at Borf.

B—When Ace lands on his back, near the edge of the platform.

U—To jump over Borf's cudgel. Then, when Ace lands...

D—To duck under Borf's cudgel. After a quick shot of Kimmy...

B—To hit Borf, but Ace gets kicked and the weapon flies out of Ace's hand.

R—To retrieve the cudgel.

U—To run past Borf.

Now, though it looks as if you should be making a few moves, simply wait until after Kimmy warns Ace about the Infanto Rays and Ace throws his cudgel aside.

U—To make Ace jump up onto Borf's back.

L—When the rope on the left flashes. (Ace will land on the round platform with Kimmy, and it will begin to float downward.)

R—To leap off of the platform as it's about to sink into the fire. (Ace will then be surrounded by the little henchmen again.)

B—To pick up the nearby cudgel.

B—As soon as Ace touches the cudgel.

L—To leap across to the left side, and safety.

R—To avoid getting blasted by the Infanto Ray. (It will hit the henchmen instead.)

R—Again, to avoid getting hit.

R—One last time to avoid the Infanto Ray.

L—Finally, by moving a large square mirror into the line of fire. (Ace reflects the ray back at Borf and gives him a taste of his own medicine.)

And there you have it. A 93-move solution to *Space Ace* that will amaze your friends. Since the precise timing varies slightly from machine to machine, simply knowing the correct moves won't guarantee a perfect game. Ninety percent of the battle is knowing the next danger before it appears, and the action you're going to take. It should also be noted that occasionally a screen will be reversed. Familiarity with the sceens and common sense will usually indicate the correct direction. For example, when Dexter lands on the motorcycle, it's only natural to move in the direction the bike's facing, regardless of whether that's left or right.

There is no single solution to *Space Ace*. If you have discovered something we missed, please send it to us.

BEAT IT!

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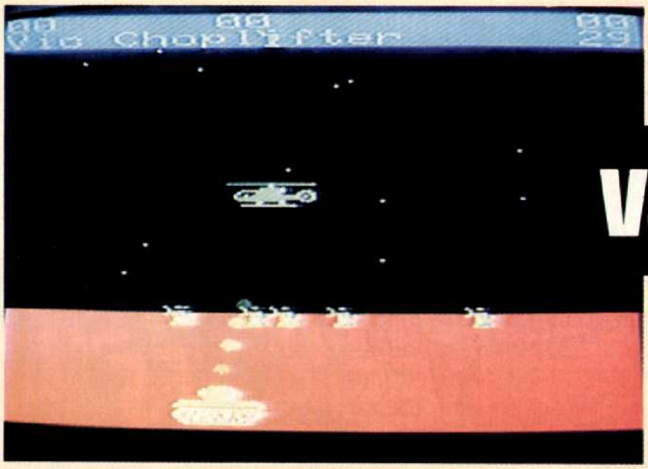
ONE ON ONE

CHOPLIFTER

(Broderbund, for Apple,
Atari, C-64, Creative, for VIC)

FORT APOCALYPSE

(Synapse, for Atari)



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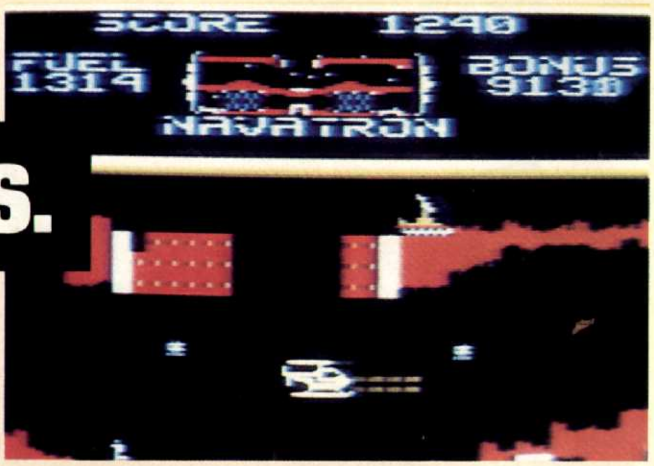


DESPITE PUBLIC HAND WRINGING ABOUT THEIR NATURE, VIOLENT games have long been the most popular. Now that trend seems to be shifting in favor of games that promote more socially responsible goals. *Pac-Man*, with its emphasis on acquisition rather than destruction, was an early example. A more recent one is *Choplifter.*

Choplifter is a helicopter rescue game with a social conscience. The scenario, though a bit silly, should appeal to the humanistic side of even the most violence-crazed gamer: 64 hostages are being held behind enemy lines by the Bungeling Empire. As the chopper pilot, your mission is to rescue as many of these prisoners as possible, while sidestepping the defenses.

The game's most unique aspect is its scoring system. A perfect score can only be achieved by transporting all 64 hostages to safety. Because of this novel system, players must unlearn the strategies of other computer games. Although your chopper can shoot the various Bungeling war machines, some of the hostages may be killed in the fighting. No points are given for any offensive action—be it successful or not. Your success is measured only in terms of how many hostages you bring to safety.

This noble activity might have been as popular as giving blood had it not been for the fact that *Choplifter* is great fun to play and also boasts some of the finest graphics and animation I have ever seen. The helicopter looks authentic and responds even more realistically. It bounces upon landing and pitches with changes in speed. As you fly, the playfield scrolls along smoothly. The hostages are particularly lifelike. As you approach, they wave frantically and scurry toward the chopper with what looks like genuine fear. A cute touch: rescued hostages give a "so long" salute upon exiting the helicopter.

The game does have a few drawbacks. There are no skill levels—*Choplifter* starts out tough and gets tougher. Although it is far from impossible at first, *Choplifter* can be a frustrating experience. This problem is further compounded by a few inconsistencies encountered later in the game. The most annoying—and baffling—is the unexplained expertise of the Bungeling jet pilots. Their ships can fly in tighter circles than your chopper can, making them hard to hit or avoid.

Although it only partially maintains *Choplifter's* nonviolent attitude, *Ft. Apocalypse* still has its heart in the right place. Rescuing hostages is a big part of the game, though reducing the fort to a puddle of slag is your primary objective.

The game begins at ground level. After refueling, you must locate and blast through one of the access doors that lead to the Draconian level. While maneuvering through the caves in search of hostages, you must blast through impact shields, shoot down Robo-Choppers and Self-Propelled Mines, and keep one step ahead of deadly moving walls.

Success leads into the Krystalline Caves in search of eight more hostages. Find them and it's on to Ft. Apocalypse itself, where one well-aimed missile brings it to the ground. To complete the mission, you must jet back through two sets of tunnels, both brimming over with angry Kralthan war machines.

For pure action, nothing out there can touch this game. It's fast, fun and most important, it changes as you progress from level to level. Still, some quirks exist and, as in *Choplifter*, they concern the handling of your chopper. Maybe my joystick is to blame, but the chopper responds *too* well in some instances. When above ground, this is a blessing, but a hastily executed maneuver in the caves almost always spells disaster. And it is nearly impossible to keep the chopper's nose facing you while moving. This maneuver is a snap in *Choplifter.*

My advice is to buy both—one for when you're feeling nice, the other for when you're out for blood.

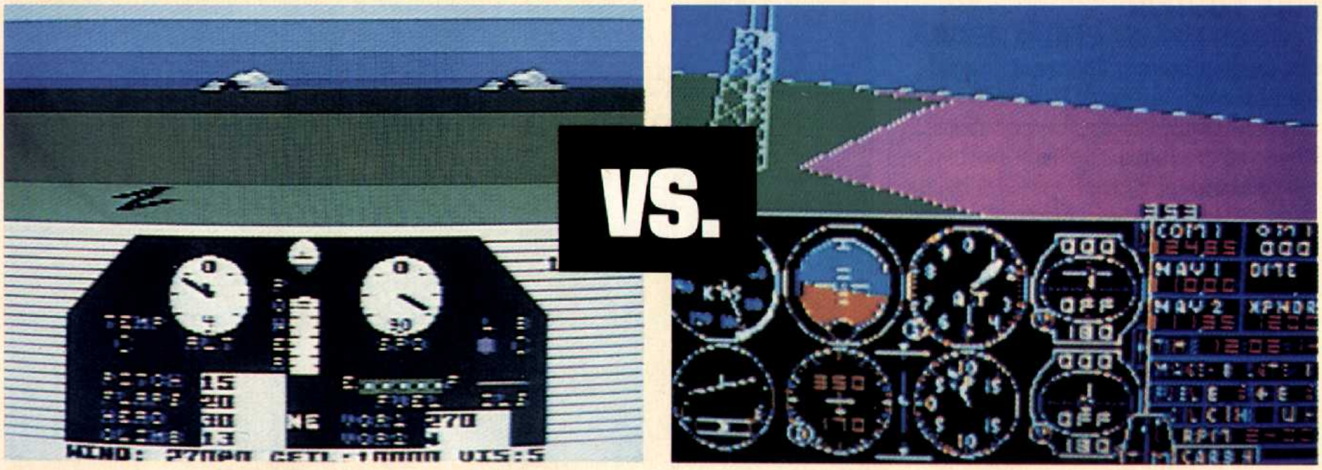
ONE ON ONE

SOLO FLIGHT

(Micro Prose, for Atari and C-64)

FLIGHT SIMULATOR II

(Sublogic, for Apple, Atari, C-64)



SAY "COMPUTER GAME" AND MOST PEOPLE CONJURE UP IMAGES OF A lone defender sending hordes of invading lizards to meet their scaley maker. Others might think of something along the lines of *Solo Flight* or *Flight Simulator II*. Personally, I wish there were more programs like these. Not only do they entertain, but they teach skills that may be of some value one day. One never knows when one might discover a true interest in flying. Hours logged on either of these simulators would then prove helpful indeed. Still, drawbacks exist and the most serious problem with both *Solo Flight* and *F.S. II* is one common to any simulation—in this case, the job of flying is successfully recreated without imparting any of the joys of flight.

Your mission in both games is to take off from one airport and land safely at another. But one look at either display screen lets you know that this isn't as easy as it sounds. Nothing is omitted in *F.S. II*. The panel has 48 different indicators, gauges, lights and knobs. *Solo Flight*'s dashboard, while less busy, is still complex, with 15 to 20 gauges and indicators. Trying to familiarize yourself with the controls through trial and error is likely to produce a runway crash.

Faced with this confusing state of affairs, your only resort is to carefully wade through the instructions. Documentation, in both cases, covers the basics of flying and the operation of the controls. The instructions for *F.S. II* weigh in at a staggering 88 pages. A second booklet, "Flight Physics & Aircraft Control with an Introduction to Aerobatics," is also included. The *Solo Flight* manual is more to the point and, thankfully, a lot shorter (15 pages).

One quick reading of either instruction booklet should give you sufficient know-how to get airborne. Staying there is another matter. Unless you enjoy performing kamikaze imitations, you must execute control corrections constantly. The most difficult manuever in both simulations—landing—is particularly tough, especially if you insist on staying in one piece.

The biggest difference between the two seems to be their perspective. In *Solo Flight*, you view your plane from behind—a unique perversion of first- and third-person perspectives. Though this detracts slightly from the game's realism, it should aid the beginner, simply because you can readily see how control adjustments affect the position and altitude of the plane. *F.S. II*, meanwhile, offers many views, all of which are from the cockpit. By pressing the appropriate keys, you can call up front, rear or any combination of side views, as well as a three-dimensional radar view that is particularly useful during the World War I bombing game. This bombing simulation may well be the toughest computer game ever devised. While busily monitoring the array of flight controls, you must also keep an eye peeled for enemy aces and targets, ranging from factories to enemy airports.

Both simulations bank heavily on realism, and it is here that *F.S. II* outclasses *Solo Flight*. Included on disk are four urban scenarios (Los Angeles, Chicago, Seattle, New York/Boston) with a total of 80 airports, compared with *Solo Flight*'s three state maps (Kansas, Colorado and Washington/Oregon) and 21 airports. *F.S. II* also offers an editor mode in which the user can custom set any number of 40 flight parameters. Finally, *F.S. II* boasts an additional 16K worth of features that are automatically loaded into systems expanded to 64K.

If you, like most people, seek immediate gratification from computer games, you would be wise to look elsewhere. (**Blue Max**, perhaps). Both *Solo Flight* and *Flight Simulator II* are a lot of work. Like a dancing bear, these simulators are interesting novelties, but not necessarily ones you would be desperate to own. Only for the enduring and patient.

By Michael Blanchet

CONVERSION CAPSULES

HIT GAMES IN NEW FORMATS

POLE POSITION

(VIC-20) Even the advanced level of this cart is a breeze. There are no road signs to smash into and the road barely curves. Just one track. The explosions when you crash don't make it. Not recommended. (Atarisoft)

KEYSTONE KAPERS

(Atari computer) A slightly more graphically embellished version of the popular cartoony VCS game. It's fun here too, but lacks the depth of MicroLab's similar *The Heist. Keystone* is best for children. (Activision)

THE DREADNAUGHT FACTOR

(Atari computer) This version looks identical to the 5200 adaptation. But there's one colossal weakness here. The same fire button is used for lasers and bombs! (You press it once for lasers and three times to drop bombs.) It is impossible to quickly drop your bombs, and the game is slowed down considerably. (Activision)

THRESHOLD

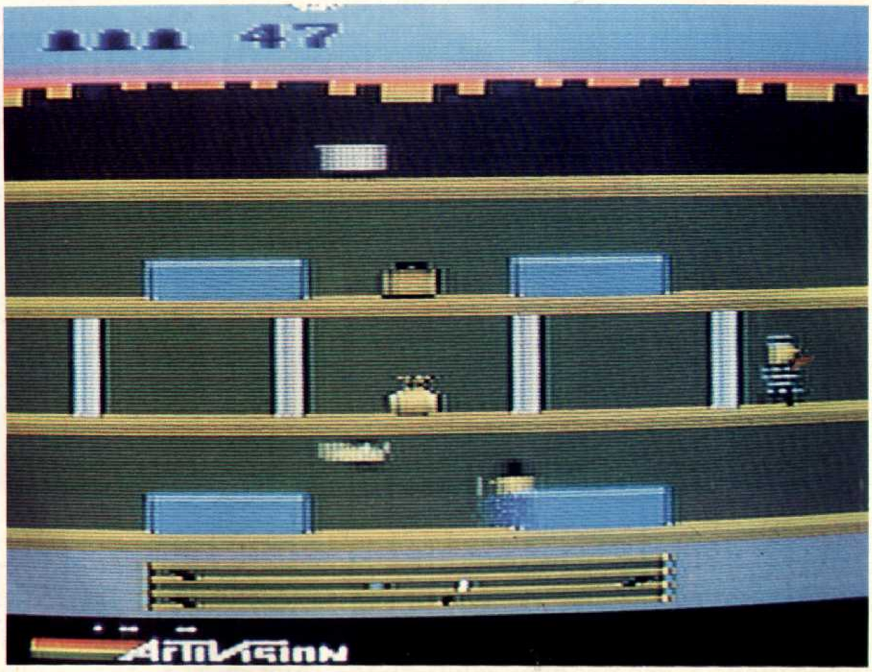
(ColecoVision/Adam) *Threshold* looks like a poor man's *Demon Attack*. The graphics are inferior and this concept is a tired one. (Sierra)

BURGER TIME

(ColecoVision/Adam) The play action here is similar to other adaptations, so the terrific flavor of the game remains. For some reason, though, the playfield has been greatly reduced. It now barely fills half the screen. You need a magnifying glass to play this one. (Coleco)

DONKEY KONG

(Adam) This jazzed-up version of the ColecoVision hit looks even more like the arcade original. The game now has that great opening, intermissions and a chance for high scorers to record their names for posterity. *Donkey Kong* is far more lively here. He pounds his chest, throws barrels that drop straight at you, and his girlfriend calls out for help. (Coleco)



Keystone Kapers (Atari VCS)

ROBOTRON 2084

(IBM PC) Not as good as the arcade version, but kind of fun. The graphics are interesting, the game is very fast and demanding, and the satisfaction of saving mankind from the deadly Robotrons is unbounded. The same comments as above regarding the use of the joystick—it is much better than the keyboard control. (Atarisoft)

ULTIMA II

(IBM PC) A vast and extensive game that truly puts you in another universe. This is a role-playing game that takes many hours to complete, and one that you can get lost in. You create your own characters and then stand by helplessly and see them die due to your own stupid mistakes. The game is engrossing and enjoyable. Hint—talk to the clerk at the Hotel California. (Sierra)

ROBOTRON 2084

(Atari 5200) Virtually identical to the excellent Atari computer version, except for a very slight increase in speed. The 5200 joysticks take some getting used to—if you don't center the stick each time, your man goes walking off into the Grunts. Great game, though. (Atari)

JUNGLE HUNT

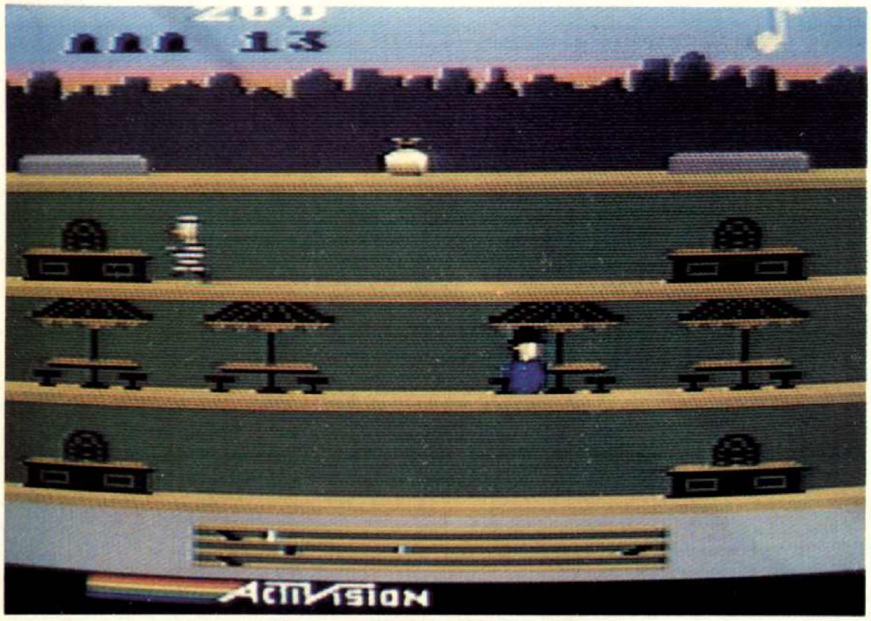
(C-64) Slightly better graphics than the Apple version, and slightly harder. Still, in general, it's awful. The game gives you a lot, but it's all bad. Buy *Ms. Pac-Man* instead. (Atarisoft)

MOON PATROL

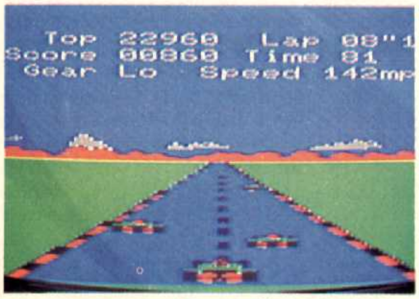
(C-64) Very good shoot-'em-up in which you must shoot rolling rocks and tanks, jump over pits and wipe out saucers. The game unfolds from point A to Z, with a new predicament at each letter. You can continue where the last game left off, as in *Vanguard*. The thinking man's killing game. (Atarisoft)

PAC-MAN

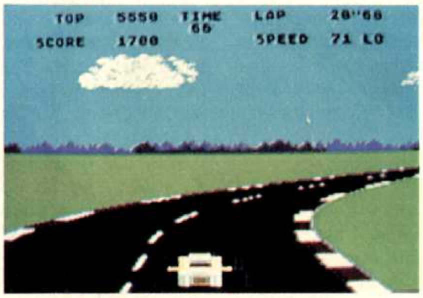
(IBM PC) The IBM version of *Pac-Man* is as good as the one for the Atari 5200. It also suffers from the same limitations. The detail on the characters is a bit fuzzy, the controls are a bit soft, and the maze is a bit limiting. This is not up to



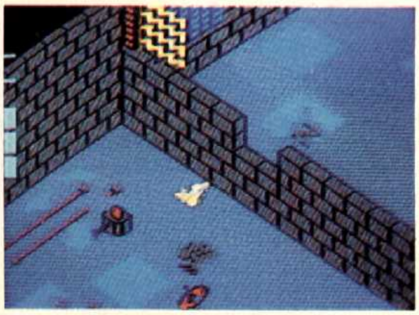
Keystone Kapers (Atari computers)



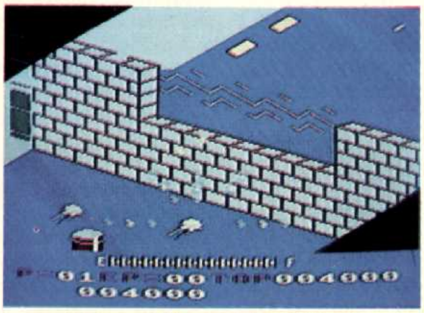
Pole Position (Commodore VIC-20)



Pole Position (Atari computers)



Zaxxon (Commodore 64)



Zaxxon (Adam/ColecoVision)

the arcade version, but we already knew that. It is certainly an enjoyable substitute. (Atarisoft)

DEFENDER

(IBM PC) This game offers the option of controlling it by keyboard or joystick. If at all possible, use a joystick. The keyboard is not properly laid out for the quick decisive moves necessary to help the humanoid race survive. The action is very fast on this game, but it becomes boring after a short time. (Atarisoft)

OIL'S WELL

(Apple) The dot-gobbler that won our Golden Floppy Award for Best Maze Game of the Year. You joystick an oil drill down through several levels on each screen, dodging "oozies" all the way. Best mazer since *Pac-Man*, and a perfect, colorful translation. (Sierra)

MR. COOL

(PCjr) About a hundred times slower than the Atari computer version. A PCjr owner will have to be climbing the walls for a *Q*Bert* clone fix before buying this. (Sierra)

JUNGLE HUNT

(Apple) It was a lousy arcade game, it was a lousy VCS game, and now it's a lousy computer game. The graphics and sound are equally terrible and the play action is boring. Strictly for kids, especially dumb ones. (Atarisoft)

MS. PAC-MAN

(C-64) Spectacular. Incredible. We love this game. An almost perfect duplication of the most popular arcade game in the world. Intermissions included. You can start out on any of four mazes. Great sound. If you don't buy this game, you've got problems. (Atarisoft)

POLE POSITION

(C-64) Adequate, but they could have done better. The road sort of squiggles around the corners. Blocky video images. Wimped-out explosions. Joystick control is slightly slow. No street signs, no arrows. Four race courses. (Atarisoft)

ARDY

(C-64) Nearly identical to Sierra's excellent *Oil's Well*. The sound is better here, but *Oil's Well* gets the nod for graphics and gameplay. In *Ardy*, the maze doesn't change much from level to level. Fun, but not as *much* fun. (Datamost)

ONE ON ONE

(C-64) Same great basketball game as the Apple version (no faster), with a jazzy ragtime demo soundtrack. You can even slam-dunk and shatter the backboard. Better as a two-player game. When you play the computer, it keeps stealing the ball and it never misses. (Electronic Arts)

DONKEY KONG JUNIOR

(Adam) As in *Donkey Kong*, this supergame adaptation (on cassette) simply takes the ColecoVision cartridge and adds some extras. This version may be the best one yet. (Coleco)

SWAP SHOP

Due to Swap Shop's overwhelming response, and even though we've doubled the number of pages, it's become impossible to fit them all in. That's why we're compelled to now charge $5 for ads, to ensure that people who most want to swap will get to see their ads in print.

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Wanted: Commodore 64 software. Any kind, on disk, tape or cartridge. Also, have six VIC-20 carts for sale: **Jupiter Lander, Radar Ratrace, Pirate's Cove, Poker, Omega Race** and **Gorf.** All are made by Commodore and the instructions are included. I'm selling them for $10 each. Write to Steve Stepleman, 7 Center Ave., Norwalk, Conn 06851.

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I'm looking to buy a video game system with cartridges, and will consider any machine, from Odyssey to the 5200. Even VCS. Or Intellevision. Or anything. Send description of system and S.A.S.E. or 25¢ and I'll get back to you with an immediate offer. Charles M. Gillman, 103 Gedney St., Nyack, NY 10960.

Looking for a Commodore 64. Will trade my Atari 5200 with **Popeye, Dig Dug, Pole Position, Centipede** and **Super Breakout** for one, or will buy it from you. Robbie Moorman, 124 Montgomery St., Highland Park, NJ 08904.

VCS carts to sell: **Superman, Space War, Combat, Space Master, X-7, Yar's Revenge, Frogger, Stampede, Warlords, Atlantis, Final Approach, Defender, Raiders of the Lost Ark, Star Voyager, Tac Scan, Vanguard, Reactor, Cosmic Ark, Gorf, Asteroids, Laser Blast, Astroblast, Breakout, Dodge 'em, Adventure, Megamania, No Escape, Street Racer, Canyon Bomber, Star Raiders** with touch pad, **Word Zapper, Football, Slot Racers, Barn Storming, Indy 500** with racing paddles, **Infiltrate, Missile Command, Berzerk, Pac-Man, Riddle of the Sphinx** and **Space Jockey.** Most include instructions. $9 each or $200 for all. And they all work! Will trade for Commodore 64 cartridge or disk games, and will buy those, too. Charles Engebretson, POB 127, Santa Rita Park, CA 93661.

Will sell my VCS **Combat** and **Circus** for $15. Want to buy cheap: (VCS) **Vanguard, Raiders of the Lost Ark,** any of **Swordquest** series, **Realsports Basketball** and **Soccer (Activision), Enduro, Keystone Kapers** and (Apollo) **Raquetball.** Make me an offer I can't refuse. Bryan Dukes, 3503 Potomac Dr., Augusta, GA 30906.

Colecovision, driving module, Atari adapter, 10 Coleco games, 10 Atari games and two game organizers. The games include **Miner 2049er, Ms. Pac-Man, Zaxxon, Turbo, Looping** and **Donkey Kong Jr.** Everything for $400. Send check or money order, or contact for more information: Edgar Hahm, 7 Echo Valley Rd., Salinas, CA 93907.

TRS-80 Color Computer (16K extended color Basic) for sale. With 11 carts (10 games, 1 typing program). Four tape games, a like-new tape recorder and brand new joysticks. $300 or best offer. David Lindall, 15 Oakland Lane, Fairport, NY 14450.

ColecoVision games for sale: **Donkey Kong Jr., Sub Roc, Zaxxon, Ken Uston Blackjack/Poker,** and more. For free price lists, write to Mike Kobett, 101 S. Mil Burn Circle, Pasadena, MD 21122.

Selling over 100 VCS carts! All have instructions, some with original boxes. Many recent, unopened. Prices from $5-$15. Also will trade some carts for any game software for TI/99 4A, PCjr and Commodore 64 computers. Especially want computer peripherals. Selling carts on a first come, first served basis. Send SASE and 25¢ for complete catalog. Dave Lively, 1440 Candlewood Drive, Worthington, OH 43085.

If you have any VCS game for sale, please write to Ward Kah, 3043 Edison Ave., Jacksonville, FL 32205.

Attention Apple owners: I'm selling a few Apple games, all on disk. **Lode Runner, Night Mission, Zaxxon, Congo, Star Blaster, Canyon Climber, Crossfire** and **Bandits.** Comes with instructions on game play. I'm selling them for $5 each. Will also trade, but write first in this case. Daniel McAtee, 6771 Fountaindale Rd., Topeka, KS 66614.

I'm selling **Berzerk** for $18, or if you have **Atlantis** for the 2600, I'm willing to trade. Also have **Barnstorming** for $6 and **Sneak 'n' Peek** by Vidtec for $15 (also VCS). James Donath, Rt. 1, Box 154A, Rosebud, TX 76570.

Looking to buy games for Commodore 64, disk, cassette or cartridge. Especially want **Blue Max** and **Pinball Construction Set.** I have a **Jupiter Lander** for $7. Also selling disks or cassettes with 10 ten programs for $10.95. Specify format and send to Patrick Ray, POB 370, Cottonport, LA 71327.

Selling Atari VCS and these carts: **Q*bert, Air-Sea Battle, Combat, Pac-Man, Asteroids, Centipede, Space War** and **Math Gran Prix.** All for $120. Write to Jonathan Bove, 16 Garrison Rd., Belmont, MA 02178.

For sale: TRS-80 Color Computer 2 Ext. BASIC 16K, with two cartridges, dust cover, two starter books, three cassette games (**Rakka-Tu, Bedlam, Pyramid**) with instructions. Call (517) 787-4920 and we'll fix a price.

Wanted: **Tunnels & Trolls** and any other adventure games, games children can play (and other cartridges may be acceptable) at a reasonable price. I can't find adventure or children's games in my area. Will buy most any carts of this type. Please contact me with cartridge names and prices. Linda A. Moser, POB 232, Claremont, NC 28610.

For sale: a Sears Super Video Arcade, compatible with Intellivision and plays all such games. Also works with all Intellivision accessories, and comes with two controllers. In perfect working condition. Six carts included: **Dracula, Microsurgeon, Blackjack/Poker, Space Armada, Star Strike,** and **Tropical Trouble.** Also selling a Colecovision with **Donkey Kong** and **Cosmic Avenger** carts. Coleco and Sears Arcade can be bought together for $200, or $100 each. Call or write to Jesse Evans, 2136 E. 95th Place, Chicago, IL 60617.

IBM PC with dBaseII, Lotus 1-2-3, Wordstar and Winchester hard disk drive. Will trade for Intellivision II with **Burgertime** or **Food Fight.** Donna Lee, 888 7th Ave., 17th floor, NYC 10106.

VIC-20 games: **Visible Solar System, Dodge Cars, Home Inventory** and **Mission Impossible**. Cassettes and carts. Will trade for **Choplifter, Crush, Crumble and Chomp** or **Protector II** (maybe) and one other game, or whatever else you have. Alan Howard, 4121 N.W. Hodges Rd., Silver Lake, 66539.

Have the following VCS carts for sale or trade: **Missile Command, Trick Shot,**

Jedi Arena and **Donkey Kong**. Also, I'm looking for games for the TI 99/4A. Best offer. Mark Seilhamer, 209 Hemlock St., Harrisonburg, VA 22801.

Want to sell my **Carnival** and **Venture** for Colecovision. Will sell to highest bidder, or trade for **Popeye**, **Mr. Do** or **Miner 2049**, for ColecoVision, of course. Write to Travis M. Morrison, 1725 Stonebridge Rd., Alexandria, VA 22304.

TI 99/4A, Commodore and Pet owners: for great graphics and adventure, try **Wampy World**, a difficult game in which you jump across logs and cars to get Wamp the frog home. If interested, send $9.95, check or money order, to Steve Wampold, 48 Columbine Rd., Tolland, CT 06084. For catalog of other games on cassette for TI, Pet, C-64 and VIC, send S.A.S.E.

I want to sell my Gemini system and some carts. I've got **Enduro**, **Defender**, **Vanguard**, **Volleyball**, **Donkey Kong** and **Mousetrap**. System uses VCS carts. $180 for whole package. Jeffrey Brant, 207 8th St., Jersey City, NJ 07302.

Apple owners: interested in a list of 600+ games for the Apple, including a brief description of each and the manufacturer's name? If so, send SASE and 50¢ to Dave Lula, 16829 McKeever St., Granada Hills, CA 91344.

VIC-20 for sale. With 16K expander, **Draw Poker**, **Radar Rat Race**, **Money Wars** and Tom Rugg's $19.95 book, *More Than 32 Programs for the VIC-20*. All for $150. Everything's new. RF modulator is loose—but it needs no repairs. Call Bruce at (212) 748-0539.

Wanted: people who possess a good supply of VIC programs for a trading group. For sale or trade, I have **Cannon Ball Blitz**, **Seawolf** and **Avenger**. John Nichols, 5006 Chambers Drive, Hoffmanes, IL 60010. Send SASE.

For Commodore 64, I have some great games on disk for trade or sale: **Infidel** (Infocom, orig. cost $36 + $8 map and hint book), **Murder by the Dozen** (CBS, orig. cost $33), and **Wizardry** (Synapse, orig. cost $35). Will swap for **Planetfall**, **Witness**, **Enchanter**, **Zork III**, **Frogger** (Sierra), **Critical Mass**, **Blade of Blackpoole**, or **Type Attack**. Eileen Donlon, 11 Middle Neck Rd., Great Neck, NY 11021.

Want to sell or trade some VCS carts: **Donkey Kong**, **Star Raiders**, **Barnstorming**, **Drag Racing**, **River Raid**, **Amidar**, **Raiders of the Lost Ark** and more. For more information, write Scott Davidson, 6310 N. Wabash Dr., Kansas City, MO 64118.

Wanted: Any Volume One issue of COMPUTER GAMES Magazine. Also ELECTRONIC GAMES, Volume One, Issue One. Please send asking price to Thomas T. Kariya, Jr., POB 157, Brookeville, Maryland 20833.

For Sale: Atari VCS with over 25 carts. Send for list and prices. Also, am selling a hand-held **Astro Blaster** video game. It's selling for $20. We can negotiate a price for VCS system. Make offer. Write to Tommy Jandt, POB 6029, Canyon Lake, CA 92380.

Looking to get started in computing? I'm selling an Atari 800 computer with a Basic programming cartridge. All for $275. Computer's only two months old. Send a letter to Tom Cavallero, 114 Darien Rd., Howell, NJ 07731.

Atari 5200 games for sale: **Galaxian** and **Qix**, $20 each or best offer. Or $35 for both. Both are in good shape. Dave Ouano, 952 Troon Circle, Frankfort, IL 60423.

TRS-80 color computer games for sale or swap: **Space Assault** (cart), **Monster Maze** (cart), **Robbatak** (cass.), **Centipede** (cass.), **Planet Invasion** (cass.), **Rakka-tu**, a text adventure (cass.), **Pyramid** (cass.), **Keys of the Wizard**, another text adventure (cass.). All need 16K RAM. All are in good condition. Make offer, or will trade for Commodore 64 accessories and games. Also want 1541 disk drive for C-64. Jon Messing, 427 Sugarland Run Dr., Sterling, VA 22170.

I'm looking for a Commodore 64 with or without accessories. If you want to sell, write Brad Henke, 315 W. 11th, Grand Island, NE 68801.

For sale: Atari VCS with eight carts, including **Q*bert** and **Trickshot**. Asking $130, but can negotiate. Will trade for Commodore 64. Danny Rizzuto, 630 E. Chester, Long Beach, NY 11561.

For sale: one brand new, medium-sized dot-matrix printer. Apple, Commodore 64 and VIC compatible. Cable included. Prints 50 characters per second. And it's regular price is $210. Must sell it for $150. Jerry Vlachos, 42-35 192 St., Flushing, NY 11358.

Atari 5200—$90. Includes **Super Breakout**. Both with original boxes and instructions. 5200 **Jungle Hunt** and **Congo** carts with boxes and instructions, $20 each. Also selling VCS with **Combat**, **Pac-Man** and **E.T.** carts for $65 or best offer. Damion Trasada, 987 Village Rd., Pittsburgh, PA 15205.

Poker and Blackjack for Intellivision. **Picnic Paranoia**, **Shamus**, **Microsurgeon** and **Fathom** for TI 99/4A. Also have other cassette and disk-based games for TI and Apple. Will sell or trade. Ask for a list and descriptions. Chad Rockwell, 943 Beaver St., Sewickley, PA 15143.

VCS carts for sale or trade: **River Raid**, $20; **Venture**, $9; **Chopper Command**, $14; **Cosmic Ark**, $5; **Bermuda Triangle**, $5; **Basketball**, $5; **M Network Football**, $19; and **Starmaster**, $15. Games I'll trade for: **Pitfall**, **Enduro**, **Super Cobra** and **Jungle Hunt**. Or let me know what you have to trade or sell. Calvin Barclift, Route 3, Box 68, Elizabeth City, NC 27909.

Custom software written for Apple. Please write with specifications for software. Include name and address. Steve Cameron, Camcom Software, Route #4, Defiance, OH 43512.

For sale: VCS wth 13 carts, including **Frogger**, **Donkey Kong**, **Star Raiders** and **Asteroids**. All for $175-$225. Or will sell system and games separately. Great condition! Carl Hepker, 405 Radar, Coos Bay, Oregon 97420.

FOR SALE—Atari 5200 with 6 cartridges and spare joystick, $80. (Carts include **Joust, Pole Position, Jungle Hunt, Q*Bert, Buck Rogers,** and **Pac-Man**) Atari 2600 with 15 games—$50. Vivian Sardinas, 9441 SW 4th St., #107, Miami, FL 33174.

For Sale: **Star Raiders, Pac-Man, Shamus, Krazy Shootout**—each $15. **Eastern Front** and **Preppie** on cassette $10 each. All for $60. Also willing to trade. Marc Lawson, 1399 Sombrero Dr., Monterey Park CA 91754.

If you would like to place an ad in the Swap Shop, send your ad along with your name and address and $5 to: Swap Shop, Computer Games, 888 7th Ave., New York, NY 10106. We will print as many ads as fit the page. We accept no responsibility after an ad is published.

NEXT WAVE SPECIAL ISSUE!

THE YEAR IN COMPUTERS!

Commodore's up, Coleco's down, Atari's sideways, and some kid in Arizona just broke a billion on Spy Hunter. *What happened in 1984? All the photos, all the news.*

SPECIAL CG BUYER GUIDE!

In addition to our regular game reviews, we will print the grades for all the games released in the last year. Also included will be a look at all the inexpensive home computers and a directory with every manufacturer's address.

THE ELECTRONIC ARTISTS!

A close-up look and interview with the folks at Electronic Arts, who jumped into the computer games business this year and stunned us with great games like Archon, One On One, *and* The Seven Cities of Gold.

HERE COMES 1985!

What games will we be playing on our computers next year? What will be the new computers? The new peripherals? It's all right here.

DON'T MISS OUT!

Grab your copy on November 20th! (Psssst! There will be another one of our free posters inside!)

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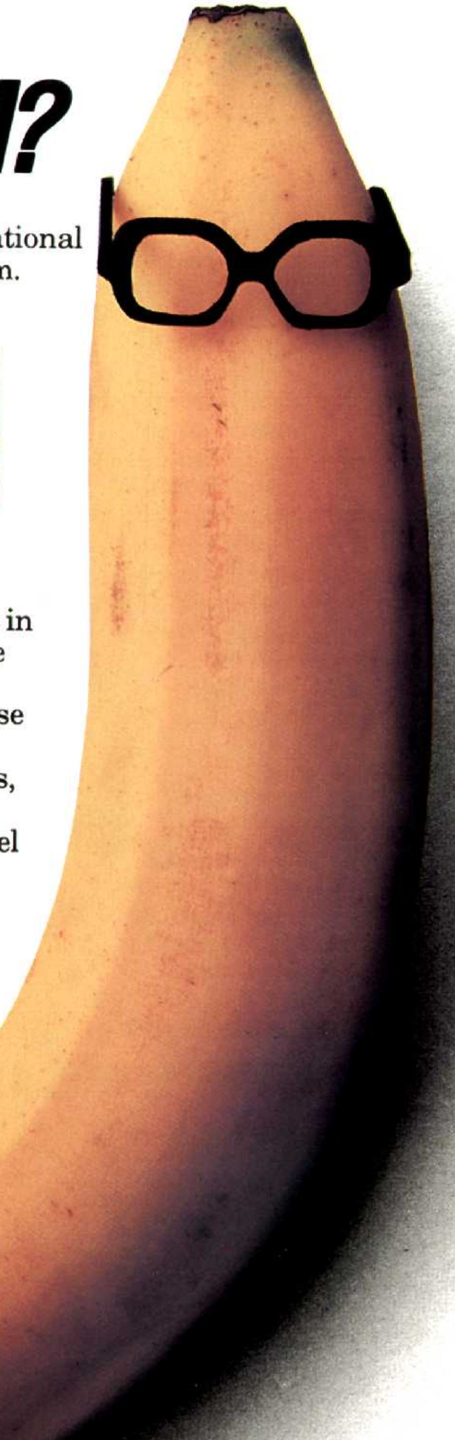
Hey! Atari screwed up! For some reason they have us on their mailing list twice! So we received *two* new trakballs, two *new* Touch tablets with *AtariArtist* software, two new *everything*! And since we can't use this extra stuff, we're giving it to you! Fill out the coupon below and send it in. We'll pick one of them randomly and send that reader the free stuff! Send in your entry today!

IS YOUR CHILD TOP BANANA, OR JUST ONE OF THE BUNCH?



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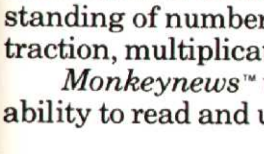

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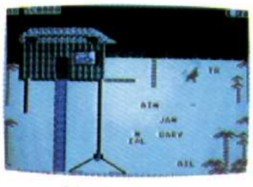

Monkeybuilder

Monkeymath

Monkeymath
by Dennis Zander

Monkeynews

Monkeynews
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In ***Donkey Kong Jr.***[2] by Nintendo[2], Junior tries to rescue his father against immense odds. And speaking of Donkey Kong, there's also ***Mario Brothers***[2] by Nintendo[2]. This time, Mario and his brother Luigi battle creatures on four levels of floors, encountering all sorts of treacherous enemies.

In ***Track And Field***[3] you can compete by yourself or head-to-head with another player. But each player must beat qualifying times, heights and distances before they can compete in each of the grueling six events.

Typo Attack is the much-acclaimed, fun-filled program that allows you to enjoy developing your typing skills at any level.

And still playing to the delight of audiences everywhere are ***Pac-Man***[4], ***Ms. Pac-Man***[4], ***Jungle Hunt***[5], ***Battlezone***™, ***Donkey Kong***[2] by Nintendo[2], ***Centipede***™ and ***Pole Position***[6].

So, if you've been searching for ways to entertain your Commodore, Apple or IBM, treat it to one of the best shows in town, one of the hits from ATARISOFT.

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*Titles available on IBM PC jr. are Ms. Pac-Man, Centipede, Donkey Kong, Moon Patrol[7] and Typo Attack. Available on the VIC 20 is Typo Attack.

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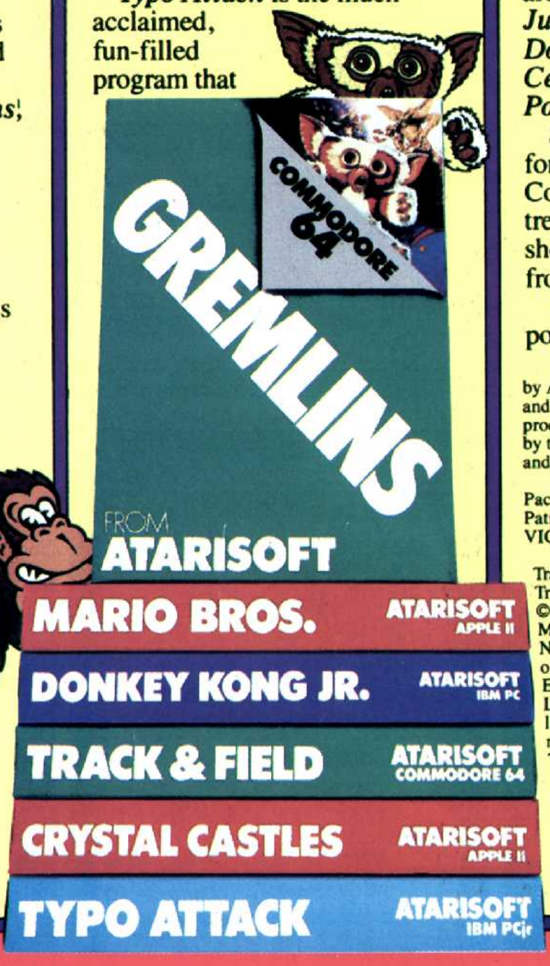
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